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MILITARY HISTORY JOURNAL

No 3, March 1987

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STRATEGEM

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 11-18

[Article published under the heading "Soviet Military Art," by Col Gen V.N. Lobov]

[Text] The history of wars shows that in all times military leaders have given great importance to strategem. They endeavored to force on the enemy false notions concerning their troops and intentions and thereby establish better conditions for victory.

The founders of Marxism-Leninism repeatedly pointed to the importance of strategem. F. Engels, in investigating wars, explained the setbacks of the Prussian Army during the Franco-Prussian War (1870-1871) to neglect of procedures for misleading the enemy. He criticized the military leaders of the feudal period for the fact that they fought "without any strategems."(1)

V.I. Lenin had high regard for the strategem question. He wrote that "there are no wars without strategem,"(3) and that "it is essential to endeavor to catch the enemy by surprise...."(4) and "be able to use the inflexibility...of the enemy and attack it when it least expects an attack."(5)

The experience of the employment of strategem has accumulated over many centuries. This is clearly shown by world history and the history of our motherland.

For example, the methods of armed combat of the ancient Slavs are instructive. Against the routine tactics of the enemy which fought in such formations as the phalanx and cohort, their soldiers successfully employed the strategem: they enticed the enemy troops into positions advantageous for themselves and then attacked. "Often they abandoned their loot as if out of fear," wrote the "Strategicon," "and retreated into the forest and then, rushing by surprise from there, caused great losses to those who approached the loot."(6)

The skillful employment of various strategems was a characteristic trait in the military art of Medieval Russia. Thus, in the Neva Battle (July 1240), victory for the Russian troops over the numerically superior Swedish forces was ensured by well organized reconnaissance, by the covert and rapid moving

up to the enemy camp, and by the surprise attack against it. In the Battle on Lake Chudo (April 1242), the heavily armed German knights advancing in a wedge were opposed by Aleksandr Nevskiy with a battle formation designed to encircle the enemy as well as a surprise attack by an ambush regiment. In the Kulikovo Battle (September 1380), Prince Dmitriy, having employed a skillful maneuver, prevented the link-up of the Tatar-Mongols with their allies and anticipated the enemy in occupying the advantageous positions, and then disrupted a simultaneous attack by the enemy infantry and cavalry which was aided by the skillful forming up of the battle order of the Russian troops. A surprise attack by the ambush regiment completed the enemy's defeat.

Numerous examples of well employed strategem were demonstrated by Bogdan Khmelnitskiy in the Liberation War of the Ukrainian and Belorussian peoples for their independence (1648-1654). In the battles, particularly at Korsun and Pilyavtsy, he widely employed skillful methods for splitting the enemy forces, launching surprise attacks against them, encircling and destroying them piecemeal.

Peter I gave great attention to the question of strategem. He had high regard for the ability to defeat the enemy "with easy effort and little blood," and for this reason always required initiative and strategem. By skillful maneuvering which combined the stubborn defense of fortresses, ambushes, raids and surprise attacks, the Russian troops weakened the Swedish Army and prepared conditions for its defeat in the general engagement at Poltava (June 1709). The configuration of the Russian battle formation employing an original system of redoubts was unexpected for the Swedes. As a result, the enemy forces were split and it came under artillery cross-fire. An important role was also played by the deception of the enemy on the strong and weak sectors in the formation of Russian troops. The men of the best trained regiments were reclothed in the uniform of new recruits and took the main thrust of the Swedes. These and other strategems as well as the steadfastness and valor of the Russian soldiers determined the decisive victory of the Russian Army over the foreign invaders.

Subsequently, the forms of strategem underwent further development in the generalship art of P.S. Saltykov in the Battle of Kundersdorf (August 1759), P.A. Rumyantsev on the Kagul River (July 1770) and so forth.

The richest arsenal of original strategems was employed by the great Russian general, A.V. Suvorov. These mirrored his knowledge of the enemy and the thorough assessment of the situation, exceptional inventiveness and flexibility of mind, originality of concept, precise calculating, the ability to make a certain risk, boldness, daring, tenacity in achieving the goal. He frequently resorted to camouflage and disinformation of the enemy, and widely employed covert actions, lightning maneuvers and surprise attacks. There is no need to describe all the "secrets" of A.V. Suvorov and due to which he achieved victories in the engagements and battles at Rymnik (September 1789), Izmail (December 1790), in the Italian Campaign (April-August 1799) and the Swiss Campaign (August 1799) as well as many others. They gained world renown and are one of the most important components in the battle successes of the Russian Army.

Suvorov's "science of winning" underwent further development in the generalship activities of M.I. Kutuzov. His use of strategem both on the strategic and tactical scale always corresponded to the specific situation and each time differed. In the Russo-Turkish War (1806-1812), M.I. Kutuzov, in commanding an army of 26,000 men, by skillful maneuvering and by confusing the enemy, enticed a portion of the Turkish Army of Ahmet-Pasha (60,000 men) from the right to the left bank of the Danube, cut off its escape route to the fortress of Rushchuk, surrounded it and forced it to surrender. The Taruta Maneuver of the general in the Patriotic War of 1812 was an example of amazing military wisdom and the finest strategem, when the Russian Army of 100,000 men literally disappeared before the eyes of the French, and then, having taken up a good strategic position, doomed the Napoleonic troops to inevitable defeat.

Strategem was successfully employed in the Russo-Turkish War (1877-1878) in crossing the Danube in the Zimnitsa area and in the nighttime assault on Kars; in the Russo-Japanese War (1904-1905) in the nighttime battles in the defense of Port Arthur.

The age of imperialism made adjustments in the form and methods of conducting armed combat. Strategems also changed and their role increased in achieving victory. As is known in the course of World War I, after the formation of a continuous front, the difficult problem arose of breaking through a positional defense. All attempts to resolve this by traditional methods, as well as by employing new but still not numerous weapons (tanks, aircraft and gas) did not produce positive results. And then for yet another time in history strategem played a major role! A noteworthy example of this was the successful offensive by the Southwestern Front under the command of Gen A.A. Brusilov (May-July 1916).

In preparing the operation, the plan was based upon the idea of breaching the front on the main sector combined with a simultaneous offensive on a number of other sectors of the front. In this manner the enemy would be confused as to the sector of the main thrust, its forces would be tied down on a broad front and the employment of reserves would be rendered difficult. "If I...attacked at one place," explained A.A. Brusilov later, "then there would have been the same failure as Ivanov in 1915 and Evert and Kuropatkin in 1916, but I acted in my own manner, with a wide front. This was my method whereby...no one knew where was the real offensive and where was the feint."(7)

The troops of the front strictly observed the measures related to the covert preparation for the offensive. Combat engineer work was carried out only at night, and by morning the structures were carefully camouflaged. Viewable sectors of the unit positions were covered with artificial screens. The assault groups and the reserves were positioned in the rear and only several days prior to the start of the offensive were they moved up through the communications trenches to the forming-up places which were an extensively developed system of trenches previously dug a distance of 200-300 m from the forward edge of the enemy defenses. The artillery took up firing positions only during the night prior to the offensive.

As a result of the covert preparation and the unexpected employment of the new method of advance on a wide front, for the first time the problem was solved

of breaching the enemy defenses on an operational scale. The Russian troops breached the fortifications of the Austro-Hungarian Army in an area of 550 km and advanced to a depth of 60-150 km, in causing enormous losses to the enemy.

The Brusilov Offensive determined the ways for employing strategem in World War I. Having borrowed his experience in preparing for and in the course of the Amiens Operation (August 1918), the French troops achieved surprise and dealt a decisive defeat to the German troops.

After the victory of the Great October Socialist Revolution, diverse strategems were actively employed by the talented military leaders and generals of the Soviet Army. Skillful feints were demonstrated by the division chief D.P. Zhloba at the Nevinnomyssk Station in the battles against Denikin. G.I. Kotovskiy masterfully employed methods to mislead the enemy in the taking of Odessa, S.M. Budenny did the same in the liberation of Voronezh. The Perekop-Chongar Operation (7-17 November 1920) conducted by the Southern Front under the command of M.V. Frunze was a brilliant example of achieving surprise. In the history of the Civil War there are many other examples of the employing of a strategem and linked to the names of V.I. Chapayev, V.K. Blyukher, I.E. Yakir, I.P. Uborevich, M.N. Tukhachevskiy, S.S. Kamenev, A.I. Yegorov and others.

The experience of World War I and the Civil War was carefully studied, generalized and employed in the aims of further developing Soviet military art. In the practical training of soldiers and commanders, great attention was given to the use of strategem, the importance of which was confirmed by the combat operations at Lake Khasan (1938), in the Khalkhin-Gol River area (1939) and in the Soviet-Finnish War (1939-1940).

Particularly noteworthy in this regard was the operation to defeat the Japanese militarists at the Khalkhin-Gol River. A distinguishing feature in the combat operations of the Soviet-Mongolian troops was the integrated nature of the measures to employ strategem as well as their planning. Precise coordination of the efforts of all the staffs and political bodies and strict supervision over the carrying out of the designated measures determined the success of the operation. Simultaneously with the plan for the forthcoming operation, a plan was also worked out for the operational and tactical deception of the enemy and this included a series of interrelated measures aimed at creating the impression for the enemy that our troops were going over to a strong defense, to conceal preparations for the offensive and thereby achieve surprise.

Particular attention was given to keeping the overall concept and plan for the forthcoming operation a secret. "In order that the enemy did not gain information on the offensive operation," recalled G.K. Zhukov, "the working out of a plan for a general offensive on the staff of an army group was carried out personally by the commander, the military council member, the

chief of the political section, the chief of staff and the chief of the operations section. The commanders and chiefs of the branches of troops and the chief of the rear services worked only on special question, according to a plan approved by the commander....

"As the time approached for the start of the operation, the various categories of command personnel were successively informed of the operation's plan, starting from 4 days and ending with 1 day prior to the start of hostilities. The soldiers and commanders received their battle missions 3 hours prior to the start of the offensive."(8)

In the aim of misleading the enemy on the nature of the forthcoming operations, an entire program of radio and telephone conversations was worked out and implemented employing a simple code on preparations for the defensive; leaflets and pamphlets were published for the soldier on the defensive and these were dropped into the positions of the enemy troops.

All movements, concentrations and regroupings were carried out solely at night and under the cover of noise created by simulating sound units, aircraft flights, as well as the firing of artillery and small arms.

The premature moving up of the troops into the forming-up places was categorically prohibited. The assault groups were moved up into them during the night before the offensive. Tank units were moved up to the forming-up places in small groups from various directions, immediately before the start of the artillery and air softening up.

As a result of a skillful combination of camouflage and deception measures with other measures to achieve surprise, the Japanese troops were caught by surprise and suffered a crushing defeat.

The Great Patriotic War from the very first days confirmed the important significance of strategem in armed combat. Where our troops covertly prepared for an operation and the enemy was misled, success was always ensured.

Soviet troops in the initial period of the war endeavored primarily to check the enemy thrust and prevent it from quickly breaking through to vitally important centers of our nation. At the same time, a particular role was played by the covert concentration of men and weapons for the surprise launching of counterstrikes and counterattacks against the exposed enemy flanks.

As combat experience was gained, the commanders began to more skillfully employ in their own interest the weak aspect of the enemy's offensive tactics where, having broken through our defenses on a narrow front, the enemy drove deeply with its mobile formations predominantly along roads, thereby leaving exposed the flanks and rear of its assault groupings. Considering such enemy tactics, the Soviet troops covertly concentrated on the flanks and launched surprise attacks against it. They also widely employed ambushes and nighttime combat.

The victory of the Soviet Army at Moscow and Stalingrad demonstrated that the covert preparation of the troops for launching attacks and the more advanced and diverse methods of misleading the enemy to a large degree ensured the success of the counteroffensive. Strategem had become an inseparable part of the Soviet troop offensive operations.

For example, of significant interest is the Belgorod-Kharkov Operation (3-23 August 1943). The strategem of the commander of the Voronezh Front, Army Gen N.F. Vatutin, was by simulating and feigning preparations for an offensive by the front's right wing to conceal the true axis of the main thrust on its left wing. For this purpose on a spurious sector, in the Sudzha area, the concentration of a combined-arms army and tank army was feigned as well as their preparations for an offensive. The simulation was carried out in accord with an elaborated plan of measures aimed at demonstrating in the first stage (26-31 July) the arrival, unloading, moving up and deployment of troops and staffs in the concentration areas and then (31 July-2 August) the intensifying of reconnaissance and reconnoitering, growing radio traffic and the moving up of the troops to the forward edge. At the same time, the enemy was disinfomed by disseminating rumors among the troops and population about a major troop concentration and the offensive being prepared.

The simulation and disinformation were directed by a specially established staff which had been provided with the necessary men and equipment. As a result of the effective execution of a range of measures to mislead the enemy and to provide camouflage, the strategem succeeded completely. The attention and forces of the Nazi troops to a significant degree were distracted from the area where our troops were preparing to launch the main thrust and this ensured the success of the operation.

The Great Patriotic War provides other instructive examples of employing strategem. Thus, in the Bobruysk Operation (24-29 June 1944), the commander of the First Belorussian Front, Army Gen (from 29 June MSU) K.K. Rokossovskiy selected for launching one of the thrusts by the front a sector where forested-swampy terrain prevailed and which the enemy considered virtually impassable and for this reason did not expect an offensive by major forces here. The covertly prepared and surprise attack by formations of the 65th and 28th Armies and the I Guards Tank Corps to the south of Parichi caught the enemy by surprise and this contributed to the rapid breaching of its defenses and to the quick development of the offensive in depth.

In preparing the Iasi-Kishinev Operation (20-29 August 1944), in the aim of establishing assault groupings, a major troop regrouping was covertly carried out. In the Second Ukrainian Front (commander, Army Gen R.Ya. Malinovskiy), all the mobile formations and a majority of the combined-arms formations were redeployed from the flanks to the center. In the Third Ukrainian Front (commander, Army Gen F.I. Tolbukhin), the main forces of the 57th, 37th and 46th Armies were concentrated on the Kitskan bridgehead, from where they planned to launch the main thrust. At the same time, the establishing of dummy assault groupings was simulated on other sectors. These measures of strategem along with other factors ensured the high results of the operation with 22 Nazi troops divisions being surrounded and defeated.

The commander of the First Ukrainian Front, MSU I.S. Konev, in the course of the Sandomierz-Silesian Operation (12 January-3 February 1945), having suddenly turned the 3d Guards Tank Army and the I Guards Cavalry Corps to the south into the rear of the enemy Silesian grouping, misled the Nazi Command on the axis of the front's main thrust. He forced the enemy to hurriedly pull

its troops from the Silesian Industrial Area so that the Nazis were unable to destroy it.

Also instructive was the employment of strategem in the defeat of the Kwantung Army during the Manchurian Operation (9 August-2 September 1945). Here, considering the particular features of the theater of operations, full use was made of the strategem experience gained in the defeat of the Japanese militarists at Lake Khasan, the Khalkhin-Gol River, and in the operations and battles of the Great Patriotic War. At the same time, in the preparations for and in the course of the Manchurian Operation, the forms of strategem underwent further development.

The planning of this operation was carried out in a situation of strictest secrecy. A strictly limited number of persons was permitted to work out the operation's plan. The work was based upon the personal assigning of tasks by the commander-in-chief and commanders, to the inferior leaders, the hearing out of their decisions and the providing of help in planning combat.

Great attention was given to keeping secret the strategic regrouping of large troop contingents to the Far East as well as to carrying out interfront and army regroupings. Correspondence and conversations related to the shifting of the troops were prohibited; the stations for servicing the trains and the unloading stations were assigned numbers; a number of troop trains was passed through the junction stations without a halt and their maintenance was carried out at intermediate stations; in the border areas of the Far East, the individual groups of troop trains were moved only during darkness, and on the Maritime Railroad which ran close to the frontier, the trains were also unloaded at night; the disembarked troops were immediately removed to the concentration areas and carefully camouflaged.

Along the entire route on the trains the commanders, the political bodies, the party and Komsomol organizations carried out extensive work with the personnel to maintain state and military secrecy. For example, the instructions to the soldiers and sergeants prepared by the political section of the 39th Army emphasized that "it is enough for a randomly dropped word, an incautious phrase, excessive verbosity and the desire to boast of combat feats in the presence of outsiders for a military secret to be given away and become known by enemy spies."(9)

The regrouping, concentration and deployment of troops in the forming-up position were carried out observing the requirements of secrecy. All troop movements were carried out solely at night. Vertical screening fences and overhead screens were set up along the roads which could be viewed from enemy territory. The troops were halted in forests and ravines for rests and halts. In the steppe areas of Dahuria and Mongolia the tanks, motor vehicles and guns were sheltered in specially dug pits over which were screens or canvas. The concentration areas of the arriving formations and units were designated along a broad front and at a distance away which ensured their prompt arrival at the assembly and forming-up areas.

Basically, natural screens (forests, brush, ravines and so forth) were employed for camouflage in the concentration areas of the First and Second Far

Eastern Fronts. In the Transbaykal area, where such opportunities were absent, extensive use was made of regulation and improvised camouflage equipment. For example, the Transbaykal Front consumed around 400,000 square m of camouflage net, 64,000 individual nets for a rifleman, and 2,000 covers for guns and tanks.(10)

Movement in the forming-up areas, the burning of campfires and the felling of lumber were prohibited. Specially established groups supervised the observance of the secrecy measures. Officer-manned checkpoints were set up on all the fronts.

Of great importance was the range of measures to mislead the enemy. On each front a special plan was worked out according to which false rail and motor troop movements were carried out, and dummy concentration areas prepared. In the aim of misleading the enemy on the axes of the main thrusts, engineer work for establishing forming-up places was carried out on an extensive front. It was permitted to operate the radios of the units and formations which had been previously in the Far East. The leadership of the fronts wore insignias of somewhat inferior ranks than their actual ones. Many generals temporarily changed their last names. For a period of reconnaissance, officers changed into a soldier's uniform.

In the fortified areas, special teams were concerned with the harvesting of hay on all sectors viewable by the enemy. Officer personnel for a period of leave was sent to local sanatoriums and vacation houses. The enemy was also misled by the fact that the population was not moved out of the border area and a peacetime life along it was in no way disrupted. Simultaneously with the moving up of the troops to the state frontier, exercises were conducted so that the local inhabitants considered what was happening as ordinary military exercises.(11)

MSU K.A. Meretskov, in recalling the preparations for the Manchurian Operation, has written: "Seemingly, it would have been an impossible matter to keep the deployment of an army of 1.5 million men along an extended frontier a secret. But...almost everywhere we caught the Japanese by surprise: generally they were giving thought to the forthcoming operations and intensely preparing for them, however the specific date for the start of hostilities remained a complete mystery for them."(12)

The effect of surprise was so great and the assault launched against the Kwantung Army from the northwest was so strong that after it the army could not recover and suffered a crushing defeat.

The given historical material makes it possible to define strategem as an aggregate of measures aimed at achieving surprise in military operations and thereby creating additional opportunities for victory with the least expenditures of men, weapons and time. The main components of strategem are secrecy and misleading the enemy.

Secrecy, in turn, can be defined as a range of measures relating to vigilance, the keeping of military secrecy and camouflage with the aim being to ensure the survival of one's troops and the achieving of surprise.

Misleading the enemy or deception is a range of measures relating to disinformation, feints and simulation carried out in the aim of creating a false idea in the enemy about one's troops, future methods and forthcoming areas of operations. The aim of deception is to force on the enemy a plan which is advantageous for oneself, to cause the enemy to weaken his group, to divert attention, men and weapons from the areas of real combat to a false sector and thereby achieve surprise.

Of course, the definition given here of strategem and its components is not complete. Unfortunately, this concept has not been theoretically elaborated in a proper manner.(13) At the same time, the experience of the past irrefutably shows the importance which strategem has played in various historical periods and under various historical conditions. For this reason, there is an urgent need to study the acquired experience and improve it on a new basis.

The development of scientific and technical progress has led to the development of more modern equipment and weapons and to the appearance of new forms and methods of armed combat. They also exist among our probable enemies who in every possible way endeavor to conceal this.

Life requires that important questions be raised concerning the defense of the socialist fatherland and requires that the troops, commanders and political workers be instructed in the methods of strategem on the basis of the very rich historical experience. "Of lasting importance are military skill, boldness and strategem...as evolved in wartime," pointed out the USSR Minister of Defense, MSU S.L. Sokolov. "All of this should be taken into account as completely as possible in troop training practices in the indoctrination of the troops and naval forces and passed on to officers who do not have combat experience, considering, of course, present-day demands on their training."

FOOTNOTES

1. F. Engels, "Izbrannyye voyennyye proizvedeniya" [Selected Military Works], Moscow, Voenizdat, 1956, p 198.
2. [Not in text]
3. V.I. Lenin, PSS [Complete Collected Works], Vol 10, p 298.
4. Ibid., Vol 34, p 383.
5. Ibid., Vol 5, p 12.
6. Prokopyi Kesariyskiy, "Voyna s gotami" [The War Against the Goths], Moscow, Izd-vo AN SSSR, 1950, p 132.
7. "Mirovaya voyna 1914-1918" [The World War of 1914-1918], "The Lutsk Breakthrough," Moscow, Izd. Vysshego Voyennogo Redaktsionnogo Soveta, 1924, p 24.

8. G.K. Zhukov, "Vospominaniya i razmyshleniya" [Remembrances and Reflections], Moscow, Izd-vo APN, Vol 1, 1986, p 203.
9. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 210, inv. 371776, file 5, sheet 7.
10. "Inzhenernyye voyska Sovetskoy Armii v vazhneyshikh operatsiyakh Velikoy Otechestvennoy voyny" [Engineer Troops of the Soviet Army in Major Operations of the Great Patriotic War], a collections of articles, Moscow, Voenizdat, 1958, p 296.
11. "Vnezapnost v nastupatelnykh operatsiyakh Velikoy Otechestvennoy voyny" [Surprise in the Offensive Operations of the Great Patriotic War], Moscow, Nauka, 1986, p 51.
12. K.A. Meretskov, "Na sluzhbe narodu" [In the Service of the People], Moscow, Politizdat, 1968, p 418.
13. The concept of "strategem" is not explained in the "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia] and in the "Voyennyj entsiklopedicheskiy slovar" [Military Encyclopedic Dictionary].

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FROM EXPERIENCE OF OFFENSIVE OPERATIONS ON RIGHT-BANK UKRAINE AT START OF 1944

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 19-27

[Article by Lt Col (Ret) S.N. Mikhalev: "From Experience of Offensive Operations on Right-Bank Ukraine at Start of 1944"]

[Text] The strategic offensive by the Soviet Army on the Right-Bank Ukraine (24 December 1943-17 April 1944) was one of the major ones during the Great Patriotic War. It developed on a front 1,300-1,400 km wide and was conducted with minimum operational pauses for almost 4 months to a depth of 250-450 km. Involved in the fighting on both sides were around 4 million men armed with 45,400 guns and mortars, 4,200 tanks and SAU [self-propelled artillery mount] (assault guns) and over 4,000 aircraft. As a result of the offensive, the First, Second and Third Ukrainian Fronts and the Second Belorussian Front, without having a substantial over-all superiority in men and weapons over the enemy, defeated the largest enemy grouping on the southern wing of the Soviet-German Front (Army Groups South and A), they liberated the Right-Bank Ukraine and a significant portion of Moldavia and created good conditions for launching new thrusts on the Brest, Lublin and Lwow axes as well as into the Balkans.(1) The Soviet troops demonstrated increased mastery in breaking through a deliberate enemy defense, in developing the offensive under the difficult conditions of the spring muddy season, as well as in surrounding and destroying large enemy forces.

As is known, the strategic offensive on the Right-Bank Ukraine included ten operations which were linked by a common over-all plan and carried out by fronts and groups of fronts with the involvement of long-range aviation, the National Air Defense Troops and on the maritime sector, the Black Sea Fleet and with the actions of all the forces being coordinated by the representatives of Hq SHC [Headquarters Supreme High Command], MSUs G.K. Zhukov and A.M. Vasilevskiy. These operations have been sufficiently studied and treated in the military history literature. Many of them were planned and conducted in the aim of surrounding and destroying opposing enemy groupings. Here the greatest success was achieved in the Korsun-Shevchenkovskiy Operation by the First and Second Ukrainian Fronts (24 January-17 February 1944) and which ended with the encirclement and complete destruction of ten enemy divisions and one enemy brigade.

However, in such operations as the Nikopol-Krivoy Rog carried out by the Third and Fourth Ukrainian Fronts, the Bereznegovatoye-Snigirevka and Odessa by the Third Ukrainian Front, it was not possible to completely rout the surrounded enemy troops. An analysis of the experience of preparing and conducting these operations makes it possible not only to better comprehend the reasons which had an unfavorable influence on the results of Soviet troop combat but also to more fully understand the process of the development of military art at the beginning of the third period of the Great Patriotic War.(2)

The over-all concept of the designated operations was based upon the idea of encircling and defeating the opposing enemy groupings. This was to be carried out, depending upon the specific situation, by various means.

Thus, in the Nikopol-Krivoy Rog Operation (30 January-29 February 1944), the main forces of the Third Ukrainian Front (commander, Army Gen R.Ya. Malinovskiy) were by an attack on the axis of Vladimirovka, Apostolovo, to reach the Dnieper from the north and in cooperation with troops of the Fourth Ukrainian Front (commander, Army Gen F.I. Tolbukhin) to surround and destroy the enemy grouping on the defensive in the Nikopol sector. Troops from the right wing of the Fourth Ukrainian Front had the task, by attacking to the northwest, of defeating the enemy on the left bank of the Dnieper and eliminating the enemy Nikopol bridgehead. Thus, the encirclement of the enemy grouping was to be carried out by pincer strikes of the two fronts.

In the Bereznegovatoye-Snigirevka Operation (6-18 March 1944), the Third Ukrainian Front was to launch the main thrust in the center of its area with the subsequent turning of a portion of the forces toward the left wing. By this maneuver they planned to cut off the enemy grouping on the defensive on the Nikopol sector, to surround and destroy it in cooperation with the 5th Assault Army and 28th Army advancing along the right bank of the Dnieper.

In the Odessa Operation (26 March-14 April 1944), the enemy was to be surrounded in the final stage by the turning of the mobile group of the Third Ukrainian Front from the Razdelnaya area to the south and southeast, along the lower courses of the Dniester. Only in this manner would it be possible to cut off the maritime grouping, to press it to the sea in the Odessa area and destroy it.

The advantageous configuration of the front line was taken into account in choosing the axis of the main thrust. Thus, the thrusts of the Third and Fourth Ukrainian Fronts in the Nikopol-Krivoy Rog Operation were launched against the base of the arc formed by the front in the lower reaches of the Dnieper, planning to come out in the rear of the surrounded enemy grouping by the shortest route. In the Bereznegovatoye-Snigirevka and Odessa Operations, the crucial factor in selecting the axis of the main thrust was the presence of bridgeheads, respectively, on the Ingulets and Southern Bug Rivers as these would provide the concentrating of the assault groupings of the fronts in the forming-up place for the offensive.

At the same time, with the start of the Odessa Operation, due to the fact that the troops of the 8th Guards Army had not been able to promptly widen the bridgehead on the right bank of the Southern Bug in the Novaya Odessa area

enough to deploy the men and weapons of the assault grouping on it, while on the right wing, in the area of Voznesensk, there had been a success, the axis of the main thrust of the Third Ukrainian Front had to be shifted from the center to its right wing. The change in the direction of the main thrust was expressed in the strengthening of the right wing armies with two rifle corps, the preferential supply of ammunition to them and the committing of the front mobile groups to the breach on this axis.(3)

Without having an over-all substantial preponderance over the enemy in men and weapons, the command of the front established superiority on the axes of the main thrusts by their bold massing at the expense of weakening the secondary sectors. In all the designated operations, the main forces of the Third Ukrainian Front were concentrated on the army breakthrough sectors which comprised 9-13 percent of the total width of its zone of advance. This made it possible to establish rather high operational densities here, with 1.5-2.5 km per rifle division, up to 100 guns and mortars and up to 16.5 tanks and SAU per kilometer of front (see the Table), thereby providing a double-triple and, in a number of instances, even more significant superiority over the enemy. Thus, on the breakthrough sector of the 8th Guards Army in the Bereznegovatoye-Snigirevka Operation, the Soviet troops surpassed the enemy by 4-fold for infantry and 10-fold for artillery. In the Odessa Operation, superiority on the axis of the main thrust of the Third Ukrainian Front was 4-4.5-fold for all indicators (with the exception of aviation).(4)

The fronts had a single-echelon configuration. The strength of the front reserves was limited. Thus, in the reserve of the Third Ukrainian Front by the start of each of the designated operations, there was one or two rifle corps which were employed for reinforcing the armies fighting on the main sector. The operational configuration of the armies consisted of one and more rarely two echelons, an army artillery group and the reserves. Ordinarily one or two rifle divisions were assigned to the army reserve with a single-echelon configuration.

In continuing the offensive and in surrounding the enemy groupings, the crucial role was assigned to the mobile groups of the fronts which included all the battleworthy tank, mechanized and cavalry formations existing in the front by the start of the offensive. The make-up of the mobile groups was determined depending upon the situation and the over-all concept of the operation. Thus, in the Nikopol-Krivoy Rog Operation the mobile group of the Third Ukrainian Front consisted solely of the IV Guards Mechanized Corps, as during this period there were no other mobile formations in the front. In the Bereznegovatoye-Snigirevka and Odessa Operations, two front mobile groups were organized for each: the first consisting of the reinforced XXIII Tank Corps with the horse-mechanized group of Lt Gen I.A. Pliyev fighting as the second.(5) The two mobile front groups were established in order to simultaneously surround the enemy groupings ahead of the left wing and to advance decisively in depth by the right wing of the front. In the Bereznegovatoye-Snigirevka Operation, the XXIII Tank Corps, in addition, was given the task of supporting the right wing of the horse-mechanized group against a possible enemy counterstrike.

Table*

**Massing of Men and Weapons of Third Ukrainian Front
in Operations on Right-Bank Ukraine**

Operations	3				4			
	1	2	5	6	7	8	9	10
Nikopol-Krivoy Rog	184	<u>23</u> 12.5	<u>93.1</u> 65	<u>2,438</u> 73	<u>192</u> 89	<u>6.1</u> 1.6	<u>17</u> 105	<u>1.2</u> 8.3
Bereznegovatoye-Snigirevka	160	<u>18</u> 11.2	<u>75.6</u> 34	<u>2,451</u> 40	<u>289</u> 95	<u>8.2</u> 2.5	<u>30.3</u> 81	<u>0.15</u> 13
Odessa	158	<u>15</u> 9.4	<u>56.2</u> 35	<u>2,047</u> 32	<u>314</u> 97	<u>3.1</u> 1.5	<u>37</u> 62	<u>2</u> 16.5

* The Table has been compiled from data of the TsAMO: folio 243, inv. 2902, file 352, sheet 88; file 358, sheet 8; inv. 2908, file 358, sheet 8; inv. 2917, file 89, sheets 336-354; file 93, sheets 6, 83-86, 160-161; file 94, sheets 4, 173-174, 197-198; inv. 2928, file 55, sheet 7; file 59, sheet 11; file 63, sheet 7; folio 244, inv. 3000, file 785, sheet 9; inv. 3004, file 48, sheet 67.

- Key:
- 1--Total Width of Zone of Advance of Front, km
 - 2--Total Width of Army Breakthrough Sectors; in the numerator, km, in the denominator in % of total width of front zone of advance
 - 3--Number of Men and Weapons in Assault Groupings; in the numerator, total, in the denominator, in % of total amount of men and weapons
 - 4--Operational Density; in the numerator, average in the front's zone, in the denominator, on the breakthrough sector
 - 5--Personnel in Rifle Division, 1,000 men
 - 6--Guns and Mortars
 - 7--Tanks and SAU
 - 8--Km per Rifle Division
 - 9--Guns and Mortars per km
 - 10--Tanks and SAU per km

The front operations commenced by the breaching of the enemy defenses on two, three and more sectors and as a result of this conditions were established for carrying out the operational envelopment and outflanking of the enemy groupings in the aim of their surrounding and subsequent destruction. In the Nikopol-Krivoy Rog Operation, success on the axis of the main thrust of the Third Ukrainian Front was achieved by the active fighting of the 37th and 6th Armies (commanders, Lt Gens M.N. Sharokhin and I.T. Shlemin) on the auxiliary sectors. Having taken the going over of the 37th Army to the offensive on the Krivoy Rog axis on 30 January as the thrust of the main forces, the enemy on

the first day committed two tank divisions to battle here. This significantly facilitated the breach of the enemy defenses on the main sector, where a day later, on 31 January, an assault was launched by the troops of the 46th and 8th Guards Armies (commanders, Lt Gen V.V. Glagolev and Col Gen V.I. Chuykov) while the IV Guards Mechanized Corps (commander, Lt Gen Tank Trps T.I. Tanaschishin) committed to the breach on 1 February over the following 6 days under difficult conditions of mud and a lack of roads advanced to a depth of 40 km (Diagram 1).



Diagram 1. Combat Operations of the Third and Fourth Ukrainian Fronts on 31 January–10 February 1944 in the Course of the Nikopol-Krivoy Rog Operation

However, the troops of the front were unable to exploit the success, as the formations on the right bank of the 8th Guards Army, having taken Apostolovo and Bol. Kostromka, by 10 February were stretched along a front of over 60 km and had lost their assault force, while the IV Guards Mechanized Corps by this time had suffered significant losses in personnel and particularly in combat

equipment.(6) The results of the operation were also negatively effected by the insufficiently energetic operations by the troops of the right wing of the Fourth Ukrainian Front on the left bank of the Dnieper as this permitted the enemy during the period from 2 through 10 February, to remove five divisions from the Nikopol bridgehead and throw them against the Third Ukrainian Front. The enemy also returned here a tank division which had been previously directed to the Korsun-Shevchenkovskiy area. By launching a strong counterstrike, the Nazi Command succeeded in checking the main grouping of the front some 8-12 km from the Dnieper floodbanks and through a corridor along the right bank of the river during 5-10 February withdraw from the encirclement a significant portion of its Nikopol grouping without the heavy equipment and motor transport.



Diagram 2. Combat Operations of Third Ukrainian Front on 6-11 March 1944 in the Course of the Bereznegovatoye-Snigirevka Operation

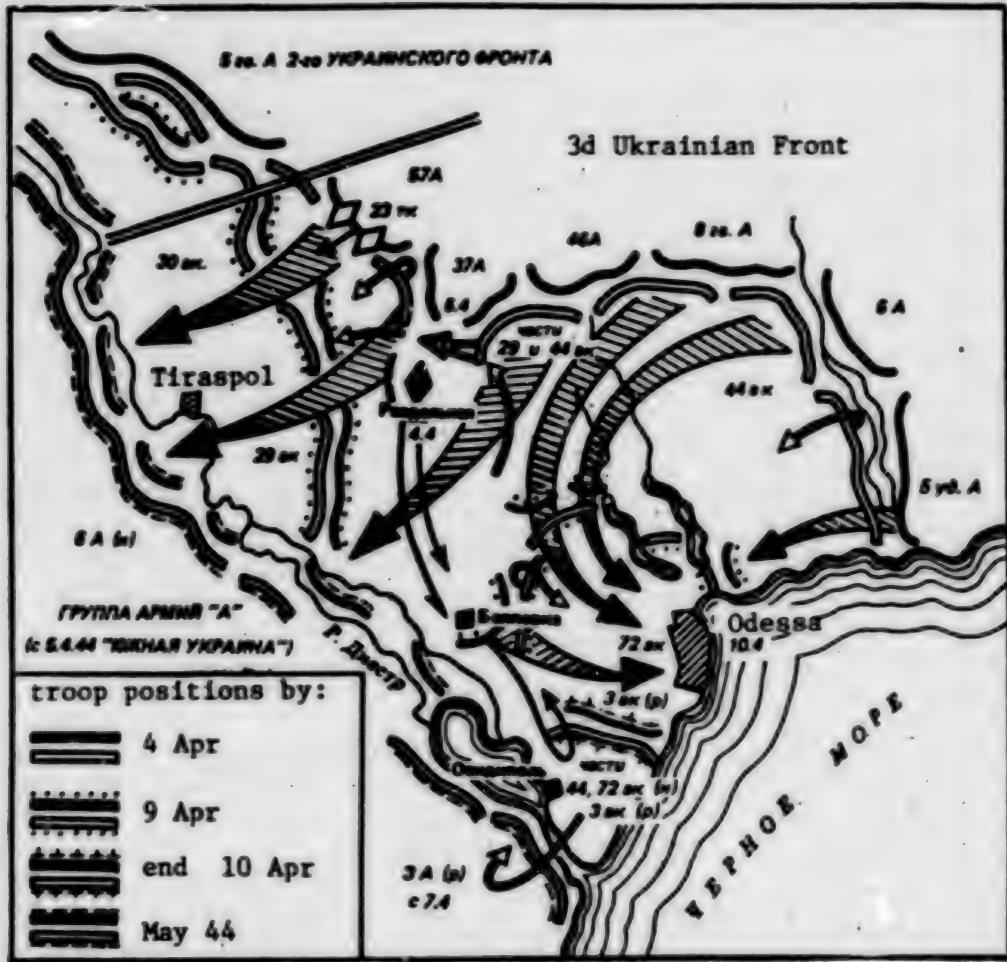


Diagram 3. Combat Operations of Third Ukrainian Front on 4-10 April 1944
in the Course of the Odessa Operation

Without having a sufficient amount of close support tanks, the rifle formations were unable to achieve a rapid rate of advance. Under these conditions, for ensuring the successful breakthrough of the enemy tactical defensive zone, the command of the front, for example in the Bereznegovatoye-Snigirevka Operation, was forced to employ a portion of the forces of the mobile groups and this led to a rapid decline in their combat capability in continuing the offensive in the operational depth.

With a single-echelon configuration of the fronts and armies, and this was a consequence of the significant lack of men and equipment in the rifle formations (from 50 percent in January to 60 percent in March),⁽⁹⁾ the army and front reserves were employed during the first stage of the operation. As a result, after the committing of the mobile groups to battle, the command of the front, as a rule, was left without a sufficient amount of forces to effectively influence the course of combat in the operational depth.

The tank and mechanized formations which made up the mobile groups of the front also were significantly short of materiel. For example, in the IV

Guards Mechanized Corps by the start of the Nikopol-Krivoy Rog Operation there were 117 tanks and SAU (47.5 percent of the TOE number), and by the start of the Odessa Operation only 78 (31.5 percent of the TOE number). In the XXIII Tank Corps on the eve of the Bereznegovatoye-Snigirevka Operation, there were 93 tanks and SAU (36 percent of the TOE strength).(10) With such a strength the mobile groups were unable to establish a strong inner perimeter of encirclement. The rifle troops which did not possess great maneuverability were unable to quickly make use of the success of the mobile formations and promptly support them in fighting in the operational depth. Thus, the establishing of a dependable inner perimeter of encirclement was the most difficult task which was not successfully carried out in the designated operations.

A majority of the operations in the Right-Bank Ukraine was prepared quickly, from 3 to 13 days. For this reason a number of preparatory measures could not be carried out fully by their start. This was particularly true of the transporting and stockpiling of materiel, the repairing of combat equipment, the receiving of reinforcements and the regrouping of troops. For example, with the start of the Bereznegovatoye-Snigirevka Operation, two tank regiments and one SAU regiment assigned to the horse-mechanized group did not participate in the fighting as they were out of fuel. For an analogous reason the XXIII Tank Corps which was committed to battle on 8 March on the second day of the fighting went over to the defensive for 2 days.(11)

The weather conditions also had a negative effect on the course and outcome of the operations on the Right-Bank Ukraine. Due to the early thaw (it started at the end of January), the terrain was virtually impassable for all types of equipment. The difficult operating conditions led to a situation where the tank troops lost from 30 to 50 percent of the combat vehicles in the course of the fighting. Artillery on mechanical traction fell behind the troop battle formations by two or three moves. Low cloudiness and thick fogs impeded air operations. At crucial moments of fighting the troops experienced an acute lack of ammunition and fuel.

The muddy season and lack of roads greatly complicated troop command. The long-distance communications radios mounted on motor vehicles fell behind. Low-power radios of the RB and RBM type could not properly ensure radio communications. The staffs also did not keep up with the advancing troops. The most effective under these conditions would have been command by having the commanders move up to the battle formations on tanks with a small operations group. This is precisely what a majority of the tank formation commanders did.

At the end of 1942 and the beginning of 1943, Hq SHC, the General Staff, the command and staffs of a series of fronts gained significant experience in preparing and conducting major encirclement operations, but by the start of 1944 this had not yet become generally known, particularly on the army level. An analysis of documents related to the planning of the Nikopol-Krivoy Rog, Bereznegovatoye-Snigirevka and Odessa Operations indicates that in working them out the specific nature of encirclement operations were not always fully considered. For example, they did not establish the forces for creating the inner and outer encirclement perimeters, there was not sufficient clarity in

organizing cooperation of the pincer formations as well as the rifle formations with the mobile troops and proper attention was not paid to complete support for the outflanking (envelopment) maneuver against enemy groupings.

Combat experience at the start of 1944 decisively confirmed that encirclement operations were most effective when conducted by a group of fronts with their coordination by representatives of Hq SHC. Such a form of leadership ensured good conditions for the effective and immediate use of the men and weapons existing on the fronts as well as the prompt involvement when necessary of the reserves and resources of the Supreme High Command. Precisely in this manner they carried out the most successful encirclement operation in the 1944 winter campaign, the Korsun-Shevchenkovskiy. In the Nikopol-Krivoy Rog Operation, also carried out by the forces of a group of fronts, it was impossible to fully realize the advantages of this form for organizing combat due to the above-described reasons. Subsequently, a larger portion of the encirclement operations (24 out of the 32 in 1944-1945) was carried out groups of fronts. Only in 8 operations were the enemy groupings surrounded by the forces of just one front.(12)

Regardless of the fact that in the designated operations on the Right-Bank Ukraine, it was impossible to complete the encirclement and defeat of the large enemy groupings, significant successes were achieved. The nation recovered important areas of iron and manganese deposits in Krivoy Rog and Nikopol; Nikolayev and Odessa Oblasts and a portion of Moldavia were liberated; a decisive defeat was dealt to the troops of the 6th German Army and the 3d Romanian Army. With the elimination of the enemy Nikopol bridgehead, good conditions were established for the operations of the Fourth Ukrainian Front against the enemy grouping sealed off in the Crimea. The troops of the Third Ukrainian Front, in reaching the Dniester, captured bridgeheads which ensured the going over to the offensive in the summer of 1944 in the aim of surrounding the enemy Kishinev grouping.

The offensive by the Soviet troops on the Right-Bank Ukraine in being conducted under difficult conditions was a significant step ahead in developing and improving the methods for preparing and conducting offensive operations. These operations were characterized by an originality of concept, by the skillful choice of the axes of the main thrusts, by the decisive massing of men and weapons on these axes, by the extensive maneuvering of the mobile formations in the operational depth as well as by continuous troop command in a difficult situation.

The positive experience of these operations, like the conclusions from an analysis of certain failures of them, were successfully employed by the Soviet Army in the subsequent campaigns of the third period of the Great Patriotic War. The study and creative utilization of this experience, undoubtedly, will help improve the quality of the operational and combat training of the staffs and troops under present-day conditions.

FOOTNOTES

1. "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia], Moscow, Voenizdat, Vol 6, 1978, pp 490-492.
2. S.N. Mikhalev participated in these operations and was a staff officer of the LXVI Rifle Corps.
3. TsAMO [Central Archives of the USSR Ministry of Defense], folio 232, inv. 2900, file 729, sheets 13-14.
4. "Operatsii Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voynе 1941-1945" [Operations of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, Vol 3, 1978, pp 158, 162-163.
5. Established on 1 March 1944 (TsAMO, folio 3470, inv. 1, file 319, sheet 8) and consisting of the IV Guards Cavalry Corps, the IV Mechanized Corps and the 5th Separate Motorized Rifle Brigade. The group was reinforced by four tank regiments and two (five in the Odessa Operation) SAU regiments.
6. TsAMO, folio 3430, inv. 1, file 127, sheets 14-62.
7. On 11 March, the commander of the XXIII Tank Corps, Hero of the Soviet Union, Lt Gen Tank Trps Ye.G. Pushkin, was killed in battle; Maj Gen Tank Trps A.O. Akhmanov was appointed corps commander.
8. "Sovetskaya Voyennaya Entsiklopediya," Vol 1, 1976, p 450; Vol 4, 1977, p 185; Vol 5, 1978, p 599; Vol 6, p 22.
9. TsAMO, folio 243, inv. 2917, file 89, sheets 294-303; file 94, sheets 37, 65, 85, 87, 173, 197.
10. Ibid., inv. 2928, file 51, sheet 7; file 59, sheet 11; file 63, sheet 7.
11. Ibid., file 59, sheet 11; folio 3418, inv. 1, file 39, sheets 1-5.
12. "Voyennoye iskusstvo vo vtoroy mirovoy voynе (Strategiya i operativnoye iskusstvo)" [Military Art in World War II (Strategy and Operational Art)], Moscow, Izd. VAGSh, 1973, p 334.

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EXPERIENCE OF FRONT OPERATIONS WITH CROSSING OF MAJOR WATER OBSTACLES

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 28-35

[Article by Col A.M. Sokolov, candidate of historical sciences: "Experience of Front Operations with Crossing of Major Water Obstacles"]

[Text] In the course of the front offensive operations in the Great Patriotic War, the troops of the Soviet Army crossed a large number of water obstacles. The carrying out of this task was an important and most complex component part of the offensive operations. It required from the men high skills and a great straining of moral and physical forces. Of particularly great importance were the crossing of large water obstacles (over 150 m wide) and the capturing of bridgeheads; this was usually carried out in the final stages of front offensive operations. An example of this would be the crossing of the Dnieper and Vistula without a pause and the capturing of bridgeheads on their western banks.

Combat experience shows that the successful crossing depended upon many factors which are also considered under present-day conditions.

The promptness and quality of organizing the crossing played a major role. The chief measures in organizing the crossing of wide water obstacles were provided for even in the preparing of the operations. Since such rivers were located a great distance from the forward edge, in the course of preparing for the offensive they worked out only the general questions of organizing the crossing and involved with the training of the troops, the preparing of crossing equipment and the procedure for moving it up and employing it. Instructive here is the working out of the questions involved in organizing the crossing of the rivers in preparing the Lwow-Sandomierz Offensive Operation (13 July-29 August 1944). The commander of the First Ukrainian Front, MSU I.F. Konev, not only focused the army commanders on the need to prepare for crossing the Vistula, but also issued special instructions on the support of the crossing, having determined the procedure for engineer support, the allocation and use of crossing equipment, its place in the operational configuration of the front and the armies, the sequence for moving up, the number of crossings which should be organized on the crossing areas of the field forces.(1)

The plan for crossing rivers was adopted, as a rule, before the main forces of the front reached the water obstacles. It set out the procedure, methods and times for their crossing by the forward detachments and main forces, the methods of defeating the enemy on the approaches to the river, as well as the tasks of the first-echelon armies and the aviation which should hit the retreating enemy troops and reserves.

The crossing tasks were given to the first-echelon armies ahead of time. Combat practices indicated that it was advisable to do this no later than 2 days before reaching the water obstacles in order to promptly establish the necessary grouping of men and weapons. Thus, the Commander of the Steppe Front, Army Gen I.S. Konev, gave the tasks to the first-echelon armies for the crossing of the Dnieper on 20 September 1943, when they were 70-150 km from the river. The crossing of the main forces was planned for 24 and 25 September, while the forward detachments would cross 24 hours previously. The armies of the First Ukrainian Front received their tasks for the crossing of the Vistula 1 or 2 days before, while those of the First Belorussian Front (commander, MSU K.K. Rokossovskiy) received them 2 or 3 days before.(2)

In approaching the water obstacle and as information was gathered about the enemy, as well as in accord with the developing situation, the tasks for the first-echelon armies and aviation were adjusted and the commander and staffs of the fronts did not have more than 24 hours for this. It was important that the staff be efficient in preparing the data needed by the commander for adopting the final plan for the crossing as well as in issuing the tasks to the troops.

Reconnaissance was of primary importance in the activities of the command and staffs of the fronts in organizing the crossing. For obtaining the necessary data, aviation was widely employed and this secured additional information on enemy defenses and the enemy grouping on the water lines, and particularly the location of the tank formations and operational reserves and the crossing areas. Characteristic in this regard was the conducting of reconnaissance in the First Ukrainian Front. Two days before reaching the Vistula (200-450 m wide), by the main forces, aerial photography had been carried out for the river and the enemy defenses on it, and as a result of this they established the nature of the defenses of the line and discovered operating crossings (five bridges and six ferry crossings). The assessing of all types of intelligence data showed that the strongest defenses had been established by the enemy on the sector of Josefow, Sandomierz. The front's main forces were aimed precisely at this sector (Diagram 1).

The troops of the front approached the major water obstacles on a wide front, as a rule, in the course of pursuing the enemy and this deprived the enemy of freely maneuvering the men and weapons. Thus, in September 1943, the troops of four fronts (Central, Voronezh, Steppe and Southwestern) reached the Dnieper on a front 700 km wide from Loyev to Zaporozhye, while the First Belorussian and First Ukrainian Fronts in the summer of 1944 reached the Vistula on a 300-km front. The pursuit on a broad front and the concentration of the main efforts on the most important axes did not allow the enemy to keep a solid defensive front. Large breaches were formed and the assault groupings of the Soviet troops rushed into these. The 3d Guards Tank Army (commander,

Lt Gen P.S. Rybalko) advanced rapidly in approaching the Dnieper. Regardless of the fact that it had made a 250-300 km march in order to be incorporated in the Voronezh Front, its formations, having begun to pursue the retreating enemy during the night of 20 September, were able to reach the Dnieper on 21 September.(3)

An important role was played by the tax against the enemy on the approaches to the water obstacles in the aim of decisively defeating the enemy troops and quickly reaching the river lines. These attacks were carried out by all available guns. The prime task was to prevent the enemy from an orderly retreat behind the water lines. The main efforts of the frontal aviation were also aimed at carrying this out. For this purpose, attacks were launched against enemy columns, road junctions and crossings. For example, on 24 September 1943, the aviation of the Steppe Front destroyed the railroad bridge in the Kremenchug area and prevented the planned crossing of the Dnieper by seven Nazi divisions. As a result, the enemy was unable to organize defenses on the opposite bank.(4)

The crossing of water obstacles without a pause was usually carried out in the same operational configuration in which the troops had approached the obstacles. The fronts, as a rule, had a single-echelon configuration with the establishing of a strong combined-arms reserve.

The rivers were crossed in the area that the troops of the fronts approached them. The length of the crossing zone depended upon the number of men and weapons to be involved, the width of the river in the front's zone of advance as well as upon the state of the defenses and the strength of the opposing enemy grouping. For example, the Steppe Front crossed the Dnieper in a zone 130 km wide, the Central Front in one 180 km, while the First Ukrainian Front crossed the Vistula in around 90 km. The commander of the front usually did not predetermine in what place each army would make the crossing. The river was crossed where the main forces of one or another field force arrived.

The main forces of the front were concentrated in narrow sectors which comprised 25-30 percent of the entire width of the crossing zone. The massing of men and weapons was achieved by redistributing them between the armies, by regrouping the mobile troops and by committing the second echelons and reserves to battle. Thus, major forces were concentrated in the sectors where the Vistula was to be crossed by the troops of the First Ukrainian Front and these were around 28 percent of the width of the entire zone of advance of the front; these forces comprised 62 percent of the combined-arms formations, 80 percent of the tanks and artillery and the main aviation forces. This made it possible on the main sector to achieve a decisive superiority over the enemy, to constantly build up the effort rapidly and quickly widen the captured bridgeheads.

The success of crossing major water obstacles in the final stage of front offensive operations depended largely upon the surprise of the crossing and this was achieved by pursuing the enemy rapidly, by the reaching of the river line by the Soviet troops before the retreating enemy units, by the successful choice of the time of the crossing and the sector for concentrating the main efforts, by the simultaneous crossing of many formations without a pause and

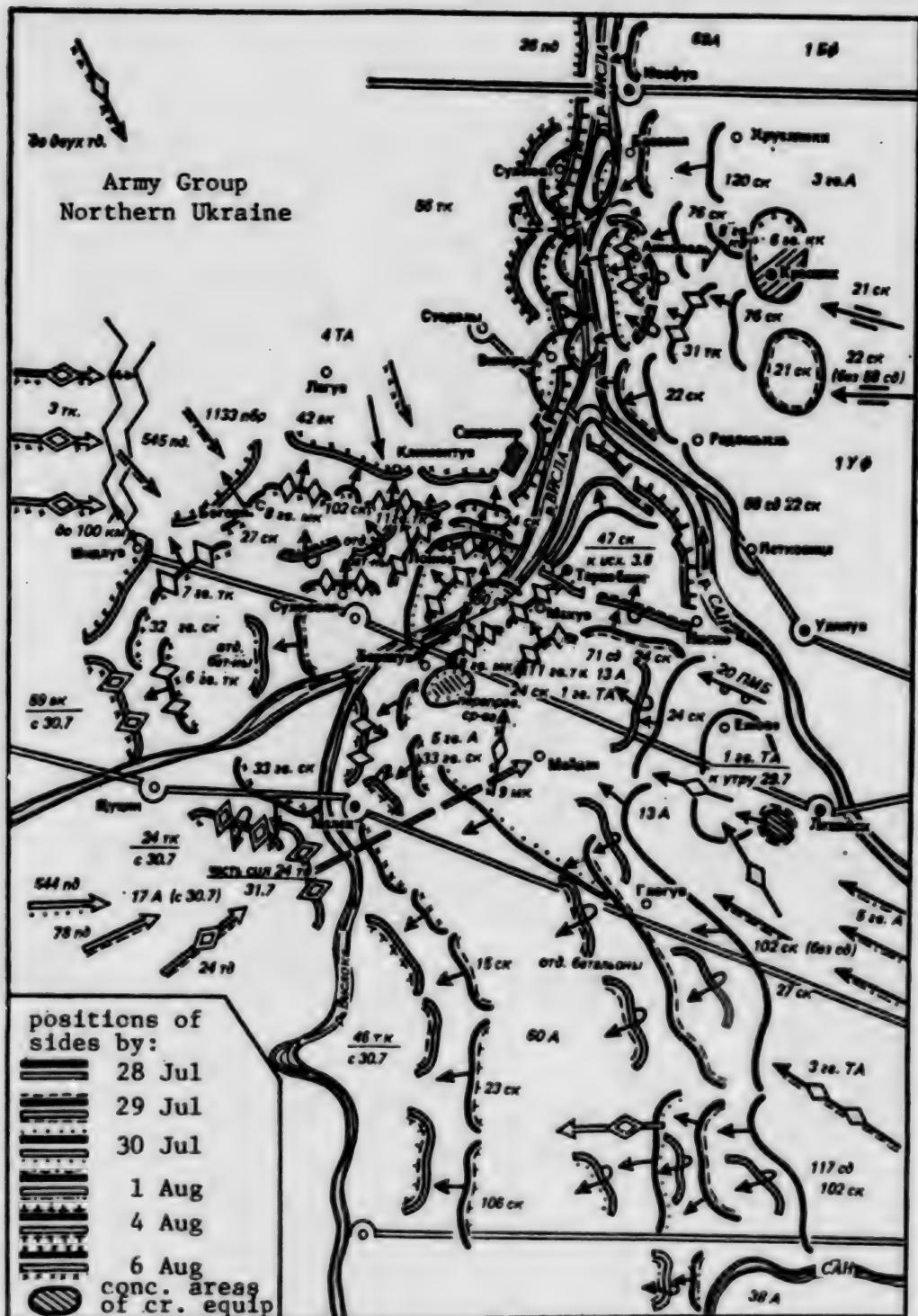


Diagram 1. Crossing of Vistula Without a Pause by First Ukrainian Front
(29 July-6 August 1944)

on a broad front. In the latter instance the enemy was unable to concentrate and employ its forces on any one sector. Thus, the enemy was caught by surprise by the rapid and simultaneous reaching of the Dnieper by four fronts and by the crossing of the river without a pause as well as extensive nighttime operations.

Usually forward detachments commenced the crossing. They were given their mission when they were one or two moves away from the river. For example, the task of crossing the Vistula by the forward detachment was given 50-60 km from the river.(6) Most often the forward detachment consisted of a rifle battalion reinforced with an artillery battalion (battery), one or two batteries of antitank artillery and a combat engineer platoon, and in the Lwow-Sandomierz Operation also by regulation crossing equipment.

The forward detachments of the 1st Guards Tank Army (commander, Col Gen Tank Trps M.Ye. Katukov) and the 350th Rifle Division (commander, Maj Gen G.I. Vekhin) of the 13th Army fought successfully on the Vistula. They quickly reached the water obstacle, reaching the Vistula simultaneously with the enemy at 1830 hours on 29 July 1944. Benefiting from the confusion of the enemy, the forward detachments by the end of the same day had crossed the river on sectors 7 km wide and had captured two bridgeheads on its left bank. On 30 July, one of these had been widened to 6 km along the front and up to 4 km in depth, while the other was up to 3 km in depth and along the front.(7) By the end of the day the bridgeheads had been linked up.

The bold and decisive actions of the forward detachments, in ending with the capture of bridgeheads, ensured the crossing of the rivers by the first-echelon formations which reached the water obstacle after them.

The crossing of the water obstacles by the main forces of the fronts and armies in the operational depth was carried out as the first-echelon formations reached them, when on the close approaches to the river the enemy flanks and groupings remained exposed. The crossing process by the first-echelon formations lasted, as a rule, 1-3 days. In the Steppe Front, the Dnieper, the width of which reached 250-1,200 m, was crossed most successfully by the 37th Army (commander, Lt Gen M.N. Sharokhin) and the 7th Guards Army (commander, Lt Gen M.S. Shumilov) (Diagram 2). The rapid and surprise reaching of the river by the formations, the bold and decisive actions and the skillful employment of crossing equipment made it possible to achieve major successes. Having repelled a strong enemy counterstrike, the armies widened the captured bridgeheads and combined them into one.

Mobile troops played an important role in the successful crossing of major water obstacles. The tank armies and formations, as a rule, crossed the rivers together with the combined-arms armies. For example, the Dnieper was crossed by the 40th Army (commander, Col Gen K.S. Moskalenko) together with the 3d Guards Tank Army of the Voronezh Front, while the Vistula was crossed by the 1st Guards Tank Army with the 13th Army (commander, Lt Gen N.P. Pukhov) of the First Ukrainian Front. The incorporation of the tank formations in the first troop echelon of the front for their involvement in the crossing made it possible to quickly reinforce and widen the bridgeheads and successfully repel enemy counterstrikes.

The success of the crossing was influenced by the rapid and continuous build-up of men and weapons on the opposite shore and capable of widening the bridgehead to an operational scale and repelling the counterstrikes of enemy reserves. The men and weapons were usually accumulated as the ferry and bridge crossings went into use. Of crucial importance was the prompt crossing of the artillery, particularly antitank, as well as tanks and the rapid strengthening of the bridgeheads in engineer terms.

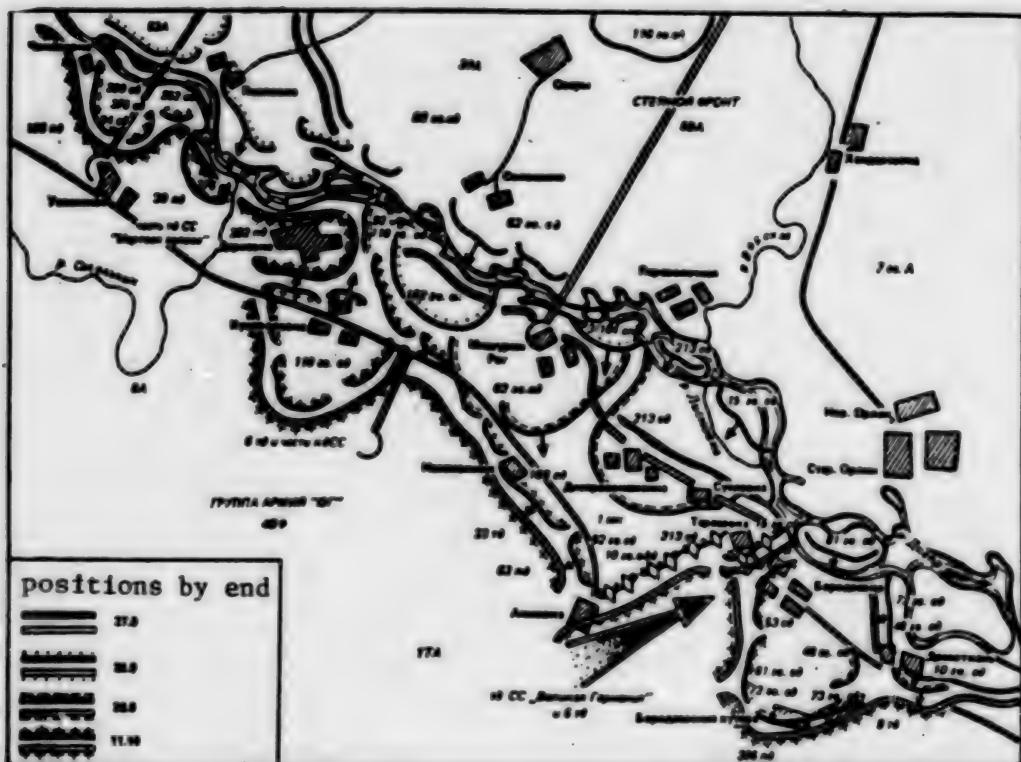


Diagram 2. Crossing of the Dnieper and Capturing of Bridgeheads by 37th Army and 7th Guards Army (September-October 1943)

The second echelons and reserves of the fronts were employed to build up the effort and achieve success. They were committed to battle with various tasks. For example, in the Battle for the Dnieper they participated in the crossing and in the fight to widen the bridgeheads. Thus, the second echelon of the Voronezh Front (commander, Army Gen N.F. Vatutin) which included the 27th Army (commander, Col Gen S.G. Trofimenko) was committed to battle in the aim of strengthening and widening the Bukrin bridgehead, while the 37th Army which was the second echelon of the Steppe Front, for increasing the rate of pursuit and crossing of the Dnieper.(8) In the Lwow-Sandomierz Operation, the 5th Guards Army (commander, Lt Gen A.S. Zhadov), the second echelon of the First Ukrainian Front, in being committed to battle was given two tasks: to continue the offensive on the left bank of the Vistula in order to widen the bridgehead, and complete the defeat of the enemy troop grouping on the right

bank.(9) The former pursued the aim of building up the front's effort to exploit the success achieved in the crossing of the river on the main sector while the latter was to support the flank and rear of the troops which had crossed the Vistula.

One of the crucial factors which ensured the successful crossing of major rivers was the extensive maneuvering of men and weapons to build up the effort in sectors where there had been a success. A vivid confirmation of this is the maneuvering of forces carried out by the command of the Voronezh Front in the course of crossing the Dnieper in the aim of shifting the main effort from the Bukrin to the Lyutezh bridgehead. Shifted here from the Bukrin bridgehead were the 3d Guards Tank Army, the VII Artillery Breakthrough Corps (commander, Maj Gen Art P.M. Korolkov), the XXIII Rifle Corps (commander, Maj Gen N.Ye. Chuvakov) as well as engineer, artillery formations and units. In addition, two rifle divisions, a tank brigade and artillery units were redeployed from the 13th Army which was fighting to the north.(10) In launching a surprise attack against the enemy from the Lyutezh bridgehead on 3 November, the troops of the front by 6 November had liberated Kiev. Here they had established a strategic bridgehead some 150 km deep on the right bank of the Dnieper and this was of important significance for conducting operations on the Right-Bank Ukraine.

The command of the First Ukrainian Front skillfully maneuvered its forces in crossing the Vistula and in capturing bridgeheads. After achieving success in the course of the crossing in the Sandomierz area, MSU I.S. Konev began to shift troops here from other sectors. In addition to the 4th Tank Army (commander, Col Gen D.D. Lelyushenko) the IV Guards Tank Corps (commander, Lt Gen Tank Trps P.P. Poluboyarov) and the XXXI Tank Corps (commander, Maj Gen Tank Trps V.Ye. Grigoryev), shifted to the Sandomierz bridgehead were the XXII Rifle Corps (commander, Maj Gen F.V. Zakharov) and a number of subunits and units of engineer troops from the 3d Guards Army (commander, Col Gen V.N. Gordov) which had only an insignificant success in the Annopol area.(11)

Artillery and aviation played an important role in a crossing. The command of the fronts and armies and the artillery staffs planned artillery support ahead of time for the crossing of the rivers. Several versions of the artillery support plans were worked out for operations where the water obstacles were to be crossed without a pause. Particular attention was given to having the artillery reach the crossing areas promptly. However, regardless of the efforts of the troops, this was not always possible. Thus, due to the lack of roads and the shortage of fuel, almost one-half of the artillery remained 50-150 km away by the time the troops were approaching the Dnieper in certain armies.(12)

In the course of the Lwow-Sandomierz Operation, the divisional, regimental and attached artillery moved continuously in the battle formations of the subunits and units, while the corps and artillery army groups were in the first-echelon formations. A portion of the artillery moved together with the forward detachments or behind them. This led to a situation where by the start of the crossing of the Vistula by the rifle divisions, the main mass of artillery was in its firing positions.

In the aim of achieving surprise, most often the rivers were crossed at night without artillery softening up. Fire was opened up only at the moment the enemy detected the crossing troops. If the crossing was to be made in daylight, it was preceded by artillery softening up. For example, in the crossing of the Vistula in the area of the 3d Guards Army artillery softening up was carried out while in the 13th Army this was reduced to a single intense shelling.(13)

Artillery operations in the crossing of major water obstacles in the course of front and army operations were characterized by extensive maneuvering. For example, the 5th Guards Army in the course of the fighting on the Sandomierz bridgehead was reinforced by the 38th and 60th Armies which had not taken part in the crossing, by five artillery regiments, while from the reserve of the front it received an antitank artillery brigade. By 9 August 1944, over 800 guns and mortars had been shifted to the Sandomierz bridgehead.(14) The decisive and promptly conducted maneuver of the artillery ensured the widening and strengthening of the bridgehead on the Vistula in the Sandomierz area.

In a crossing the main efforts of the aviation were directed at assisting the troops in approaching the water obstacles as well as in capturing and widening the bridgeheads. With the start of the crossing the aviation attacked artillery firing positions and impeded the approach of enemy reserves to the river.

However, in a number of operations, including the Lwow-Sandomierz, the activity of Soviet aviation during the first days of the crossing was low due to the lagging behind of the fighter bases and at times a shortage of fuel. Only with the building of airfields in the crossing area did its activity increase.

The successful crossing of major water obstacles without a pause depended upon the precise organization of engineer support and the able employment of regulation crossing equipment. Since most often there was not enough crossing equipment, correctly organized engineer support was very important. This was particularly apparent in the course of crossing the Dnieper. Thus, on the Voronezh and Steppe Fronts, the pontoon bridge brigades reached the river on the 6th-11th day of the crossing. They arrived piecemeal. The main reasons for the falling behind of the regulation crossing equipment was their movement outside the battle formations of the first-echelon formations and the lack of constant control over their advance by the commanders of the fronts and armies. The crossing commenced chiefly with improvised equipment and this had a negative effect on its pace as well as the time required to widen the bridgeheads.

The experience gained on the Dnieper told positively on the organized crossing of the Vistula in the course of the Lwow-Sandomierz Operation. Here engineer support was organized in a particularly clear manner and skillful use made of the crossing equipment. The commanders of the front and the armies gave great attention to the moving up of the crossing equipment behind the troops. The task of moving up to the Vistula was given to the pontoon bridge units 1 or 2 days prior to the start of the crossing. Light crossing equipment was moved up in the battle formations of the formations and units while the pontoon

bridge battalions traveled 15 km behind the forward units.(15) As they approached the Vistula, they concentrated in the area of the 13th Army in the Baranow area. By the end of the day of 30 July, that is, on the first day of the crossing, around nine N2P pontoon bridge parks from the 3d and 6th Pontoon-Bridge Brigades were located here.(16) This made it possible for the engineer troops to successively support the crossing by the first-echelon formations and then move across the front's main forces.

Due to the high mobility of the crossing equipment, particularly the pontoon-bridge parks which moved up to the Vistula simultaneously with the first-echelon formations, the crossing of the troops was carried out at a rapid pace. Over a period of 12 days, here they succeeded in moving four armies, including two tank ones, to the Sandomierz bridgehead.

The successful offensive operations involving the crossing of major water obstacles were ensured by conducting effective and continuous party political work. Here special attention was given to the moral and psychological training of the personnel. An important document in this work was the Special Directive of Hq SHC of 9 September 1943 concerning the decorating of soldiers and commanders for the successful crossing of major water obstacles. Before each operation the commanders and political workers informed the men of this. Great attention was given to the extensive propagandizing of the experience of crossing the water obstacles. For this purpose, conversations were held and materials propagandized on the methods and equipment for crossing. For example, in the formations and field forces of the First Ukrainian Front they published pamphlets and express sheets called "Pass Up the Line" and which described the men and subunits which had distinguished themselves in crossing rivers. Concreteness, flexibility and the employment of different forms and methods were important traits of the party political work.

FOOTNOTES

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 236, inv. 2698, file 364, sheets 24-25.
2. "Sbornik voyenno-istoricheskikh materialov Velikoy Otechestvennoy voyny" [Collection of Military History Materials From the Great Patriotic War], Moscow, Voyenizdat, No 12, 1954, pp 8-9, 112; TsAMO, folio 236, inv. 2673, file 1033, sheets 235-237; folio 233, inv. 2356, file 440, sheets 19, 25.
3. "Stroitelstvo i boyevoye primeneniye sovetskikh tankovykh voysk v gody Velikoy Otechestvennoy voyny" [Organizational Development and Combat Employment of the Soviet Tank Troops During the Years of the Great Patriotic War], Moscow, Voyenizdat, 1979, p 187.
4. I.S. Konev, "Zapski komanduyushchego frontom 1943-1945." [Notes of a front commander 1943-1945], Moscow, Voyenizdat, 3d Edition, 1982, p 60.
5. [Not in text]

6. TsAMC, folio 312, inv. 4245, file 179, sheets 34-36; folio 361, inv. 6079, file 266, sheets 339-340.
7. Ibid., folio 236, inv. 2704, file 126, sheet 282; file 11, sheet 43; folio 361, inv. 6079, file 280, sheet 149.
8. VOYENNO ISTORICHESKIY ZHURNAL, No 9, 1973, p 18.
9. TsAMO, folio 236, inv. 2673, file 1060, sheet 141.
10. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945], Moscow, Voenizdat, Vol 7, 1976, pp 254-255.
11. M.A. Polushkin, "Na sandomirskom Napravlenii. Lvovsko-Sandomirskaia operatsiya (iyul-avgust 1944 g.)" [On the Sandomierz Sector. The Lwow-Sandomierz Operation (July-August 1944)], Moscow, Voenizdat, 1969, pp 143-149.
12. VOYENNO-ISTORICHESKIY ZHURNAL, No 9, 1973, p 23.
13. TsAMO, folio 236, inv. 2700, file 246, sheet 88; file 255, sheets 226-228; folio 312, inv. 4259, file 182, sheet 95; inv. 4245, file 254, sheet 155.
14. M.A. Polushkin, op. cit., pp 143-144.
15. TsAMO, folio 361, inv. 6099, file 123, sheets 366-371; folio 236, inv. 2698, file 415, sheet 10; file 363, sheet 11; folio 299, inv. 3076, file 74, sheet 58.
16. Ibid., folio 236, inv. 2698, file 352, sheet 102.

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TANK ARMY ON THE DEFENSIVE

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[Article by Col Yu.N. Sukhinin, candidate of historical sciences, docent: "Tank Army on the Defensive"]

[Text] The uniform tank armies organized during the years of the Great Patriotic War in an absolute majority of the offensive operations of 1943-1945 comprised the mobile groups of fronts (follow-up echelons) and were the basic means for exploiting a tactical success into an operational one. However, the war's experience showed that in a number of operations, albeit temporarily, the tank field forces were forced to also conduct defensive actions in the process of the offensive. They went over to the defensive most often during the concluding stage of the front offensive operations. The transition was made under various conditions. The developing situation had a substantial effect both on the organization of the defenses as well as the course of combat.

As is known, the Nazis, in endeavoring to halt the Soviet troop offensive, not only stubbornly held on to defensive lines but also launched counterstrikes against the advancing troops. Often the objectives of these were tank armies fighting away from the main forces of the front with exposed flanks and extended (and sometimes broken) delivery and evacuation routes and not having a proper air cover. The enemy usually included in the counterstrike groupings three-five tank divisions numbering from 100 to 600 tanks and assault guns(1) as well as infantry formations and units. The Soviet tank armies, the formations of which in the previous offensive battles had suffered significant losses, by the start of repelling the enemy strikes had from 110 to 380 tanks and SAU [self-propelled artillery mount].(2) Enemy superiority in armored equipment made it possible for it to temporarily seize the initiative on individual sectors and forced the tank field forces to take up the defensive. Under such conditions, for example, on 1 August 1944, to the east of Warsaw (the Lublin-Brest Offensive Operation) the 2d Tank Army of the First Belorussian Front went over to the defensive.(3)

The tank armies went over to the defensive after meeting engagements which had gone unsuccessfully for them. This was the case, for example, on 14 August 1943, in the Belgorod-Kharkov Operation at Bogodukhov (1st Tank Army of the

Voronezh Front)(4) and on 11 November 1943 in the Kiev Operation to the south
Table 1*

Certain Indicators of Tank Army Defensive

No.	Operations, Fronts	a	b	c	d	e
1	Belgorod-Kharkov, Voronezh	1 TA with 6 A; 14-17 Aug 43	180	to 20	8-10	1-ech
2	Belgorod-Kharkov, Voronezh	5 Gds. TA with 5 Gds. A; 14-17 Aug 43	110	to 20	10-12	"
3	Kiev, First Ukrainian	3 Gds. TA with L Rif. Corps; 11-14 Nov 43	150	30-40	8-12	1-2 ech
4	Korsun-Shevchenkovskiy, First Ukrainian	6 TA with XLVII Rif. Corps; 4-17 Feb 44	200-250	to 50	15-20	2-ech
5	Korsun-Shevchenkovskiy, Second Ukrainian	5 Gds. TA with XLIX Rif. Corps; 4-17 Feb 44	150	to 50	12-15	"
6	Lublin-Brest, First Belorussian	2 TA; 1-5 Aug 44	380	40-50	12-20	1-ech
7	Lwow-Sandomierz, First Ukrainian	3 Gds. TA with 13 Gds. A; 20-31 Aug 44	150-200	30-40	10-15	"
8	East Prussian, Second Belorussian	5 Gds. TA with XLII Rif. Corps; 24-30 Jan 45	160	to 40	to 20	"

* Table was prepared from data of TsAMO SSSR: folio 203, inv. 51360, file 60, sheet 210; folio 223, inv. 50, file 664, sheets 220-221; folio 315, inv. 4440, file 3, sheets 228-238; folio 236, inv. 13316, file 1, sheets 2, 73; folio 240, inv. 29595, file 1, sheet 77; folio 2336, inv. 356, file 20, sheets 204-219; folio 315, inv. 4440, file 146, sheets 88-89.

Key: a--Tank Armies, Length of Their Joint Defensive Actions With
Combined-Arms Field Forces (Formations)

b--Number of Tanks and SAU in Tank Army
c--Width of Defensive Zone, km
d--Depth of Defense, km
e--Operational Configuration

of Fastov (3d Guards Tank Army).(5) By the end of the designated meeting engagements the situation had become extremely complex. The battle formations of the tank armies were scattered along the front and in depth and cooperation was disrupted both within the tank field forces and often with adjacent units. Due to the extent of the rears, interruptions arose in the supply of troops with materiel. Under such conditions the tank armies took up the defensive in the same operational configuration and ordinarily in the same areas where the meeting engagements had occurred. The reinforcing of lines and areas was the chief means of going over to the defensive.

The experience of the Great Patriotic War showed that one of the most important tasks for the troops in offensive operations was to capture and hold bridgeheads on the main water lines. The combat operations of the First Ukrainian Front in the concluding stage of the Lwow-Sandomierz Operation (the Sandomierz area) was an example of a stubborn fight to widen and hold the bridgeheads. In repelling the counterattacks in the northern part of the Sandomierz bridgehead, of important significance was the going over of the 3d Guards Tank Army to the defensive precisely when the enemy was preparing to launch a strong blow against it and had concentrated three tank divisions and three infantry divisions for this.(6)

At times, chiefly for the conducting of offensive operations by the fronts to encircle large enemy groupings, the tank armies went over to the defensive ahead of time. Thus, in the course of the Korsun-Shevchenkovskiy Operation, the 6th Tank Army of the First Ukrainian Front and the 5th Guards Tank Army of the Second Ukrainian Front, after reaching the external perimeter of encirclement of the enemy grouping on 31 January 1944, were ordered to go over to the defensive by the front commanders.(7)

The defensive in the course of the offensive operations by a majority of the tank armies was organized in a limited time. Research on archival documents indicates that from 7-8 hours up to 24 hours were spent on this. Only the 6th Guards Army and the 6th Tank Army in the Korsun-Shevchenkovskiy Operation which were ordered to go over to the defensive ahead of time had about 3 days to organize this. The going over to the offensive occurred under difficult conditions, since during the period of reinforcing the achieved lines the tank armies simultaneously with carrying out measures of an organizational sort were forced to also carry out battle tasks: a portion of their forces conducted offensive battle while another repelled enemy attacks. In a short period of time it was essential to adopt a plan using a map, to promptly set the tasks for the troops, to regroup the men and weapons to the axis of the main enemy thrust, organize a fire plan and establish man-made obstacles.

The plan was adjusted in the field as the situation became clear, as additional information was received on the enemy, our own troops and adjacent units and issued to the units and formations. In the plan they gave the goal of going over to the defensive, the areas for the concentration of the army's main efforts, its operational configuration and defensive zones of the formations.

The commanders of the field forces designated the concentration areas of the main army forces proceeding from the enemy's actions and the ascertained axis of its main thrust. By maneuvering within the field forces and by reinforcing the tank armies with reserves of the fronts it was possible to create very high densities of troops and combat equipment on the main axes of the enemy offensive. Thus, while per kilometer of defensive front there was an average of 3-10 tanks and SAU, 7-15 guns and mortars and 0.3-0.9 of a rifle (motorized rifle) battalion, on the main axes there were 7-17.5 tanks and SAU, 9-30 guns and mortars and 0.5-1.3 of a rifle (motorized rifle) battalion.(8)

The questions of the operational configuration of the army troops and the establishing of defensive zones were resolved along with the massing of men and weapons.

In going over to the defensive, the tank armies were compelled to have usually a single-echelon configuration of battle formations. The operational configuration also included the general, antitank artillery and artillery reserves as well as a mobile obstacle construction detachment. When a tank field force was reinforced with antiaircraft artillery, antiaircraft artillery groups were incorporated in the operational configuration. A second echelon was established in the event the tank army was reinforced with rifle and artillery formations and units as well as with a possibility of conducting a regrouping of the troops (the 3d Guards Tank Army in the Kiev Operation and the 6th and 5th Guards Tank Armies in the Korsun-Shevchenkovskiy Operation). With a single-echelon operational configuration, usually only a main defensive zone was established. Its depth coincided with the depth of the battle orders of the formations and was 5-10 km. The positions of the army reserves with only one defensive zone were prepared to a depth of 10-12 km from the forward edge. Considering them the total depth of the defenses of tank armies reached 12-15 km.

With a two-echelon operational configuration, the edge of the second defensive zone was set along the line of the second echelon's position. This ran, as a rule, the same distance away from the forward edge as the positions of the army reserves, that is, 10-12 km. Its depth was 6-8 km. The total depth of the two-zone defensive, for example, in the Korsun-Shevchenkovskiy Operation reached 16 km (5th Guards Tank Army) up to 20 km (6th Tank Army).

The defensive was organized in such a manner as to ensure the strong holding of its main zone, to repel enemy strikes and to prevent the enemy from breaking through in depth.

Since the enemy launched strikes against the tank armies basically with the forces of tank groupings, their defenses were readied primarily as antitank ones.

Contributing to the greater strength of the defenses was the establishing of antitank areas between the defensive zones and these areas included antitank and self-propelled artillery as well as a portion of the artillery from the rifle formations. In addition, tank ambushes were organized and these were located on the forward edge, in the intervals between the company strongpoints and deep in the defenses; a portion of the tanks and SAU (primarily those with

an immobile undercarriage) was turned into fixed firing positions. Mixed minefields were also set out.

Table 2*

Density of Forces Established in Conducting Defensive by Tank Armies

No.	Operations, Fronts, Tank Armies and Combined-Arms Field Forces (Formations) Fighting Jointly With Them	Density of Forces Per km of Front	
		In Defensive Zones	In Concentration Areas of Main Forces
1	Belgorod-Kharkov, Voronezh, 1 TA with 6A	9-10 tanks, SAU; to 15 guns, mortars; 0.9 rif. (mot. rif.) btln.	13 tanks, SAU; 20 guns, mortars; 1.3 rif. (mot. rif.) btln.
2	Belgorod-Kharkov, Voronezh, 5 Gds. TA with 5 Gds. A	5-6 tanks, SAU; to 10 guns, mortars; 0.8 rif. (mot. rif.) btln.	10 tanks, SAU; to 15 guns, mortars; 1 rif. (mot. rif.) btln.
3	Kiev, First Ukrainian, 3 Gds. TA with L Rif. Corps	4-5 tanks, SAU; 6-7 guns, mortars; 0.6 rif. (mot. rif.) btln.	7-8 tanks, SAU; to 12 guns, mortars; 0.8 rif. (mot. rif.) btln.
4	Korsun-Shevchenkovskiy, First Ukrainian, 6 TA with XLVII Rif. Corps	5-6 tanks, SAU; 10-12 guns, mortars; 0.3 rif. (mot. rif.) btln.	10-12 tanks, SAU; 25-30 guns, mortars; 0.9-1 rif. (mot. rif.) btln.
5	Korsun-Shevchenkovskiy, Second Ukrainian, 5 Gds. TA with XLIX Rif. Corps	3 tanks, SAU; 11 guns, mortars; 0.3 rif. (mot. rif.) btln.	8-10 tanks, SAU; 20 guns, mortars; 0.9-1 rif. (mot. rif.) btln.
6	Lublin-Brest, First Belorussian, 2 TA	9-10 tanks, SAU; 7-8 guns, mortars; 0.4 of mot. rif. btln.	17.5 tanks, SAU; 15 guns, mortars; 0.5-0.6 of mot. rif. btln.
7	Lwow-Sandomierz, First Ukrainian, 3 Gds. TA with 13 Gds. A	3-5 tanks, SAU; 10 guns, mortars; 0.9 rif. (mot. rif.) btln.	To 10 tanks, SAU; 15 guns, mortars; to 1.3 rif. (mot. rif.) btln.
8	East Prussian, Second Belorussian, 5 Gds. TA with XLII Rif. Corps	4 tanks, SAU; 9 guns, mortars; 0.8 rif. (mot. rif.) btln.	To 6-7 tanks, SAU; to 12 guns, mortars; 1 rif. (mot. rif.) btln.

*Table compiled from data of TsAMO SSSR given in note to Table 1.

The successful execution of defensive tasks by the tank army formations depended largely upon the clarity and coordination of their actions. When little time was left for reconnaissance, cooperation was organized without a trip to the field. Instructions for cooperation were issued primarily in the interests of those formations which were to fight on the main sectors. In organizing cooperation, in the aim of eliminating a possible enemy drive into our defenses, the commanders of the armies and corps gave chief attention to the maneuvering of men and weapons. For this it was planned to initially move up the brigade reserves and then the corps reserves to the sector of a possible enemy incursion. The army reserves were to be employed in the fighting for the main defensive zone.

If the situation permitted, cooperation was organized in the field. Thus, during the period of conducting the Korsun-Shevchenkovskiy Operation, the commander of the 6th Tank Army on 1 February 1944 in the course of reconnaissance adjusted the tasks for the formations and set out the procedure for their actions with the advance of the enemy to the forward defensive edge, in the course of the fighting for the main zone and eliminating the incursion of the enemy groupings.(9) In a similar manner the adopted plan was adjusted by the commander of the 5th Guards Tank Army in this same operation.(10)

It should be pointed out that the stability of the tank army defenses also depended upon coordinated actions between the tank and mechanized corps and the attached rifle field forces. Cooperation between them was organized in accord with a plan worked out by the tank army staff on the basis of the decisions of the field force commander. This document, as is shown by the experience of the 5th Guards Tank Army and 6th Tank Army, dealt with the questions of the reinforcing of the rifle formations with the tank (mechanized) brigades and SAU regiments, it set out the procedure for their joint actions in the main defensive zone, it indicated the particular features of employing the rifle formations assigned to cover the tank ambushes, and established the signals for the start and breaking off of the tank (SAU) fire and reciprocal warning signals.

Particularly great attention was given to the organizing of cooperation between the tank army corps and the rifle formations in preparing and carrying out the counterstrike by the second echelon and reserve forces. The rifle troops were given the task of holding the occupied lines by a stubborn defense and of preventing the moving up of the Nazis to the flanks. The enemy which had wedged in was to be cut off and destroyed basically by the tank (mechanized) formations of the second echelon and reserve as well as by the rifle units and subunits which had retreated from the main area back into the defenses. For this reason, when the situation permitted, the commanders of the cooperating formations in the field designated the best axis for the counterstrike and clarified the methods of action of the infantry and the tanks.(11)

The successful combating of the enemy assault groupings depended largely upon dependable cooperation between the tank army and supporting aviation and this was planned and organized on the basis of the decision and instructions of the

front commander as well as the tasks set by the tank army commander, the staffs of the tank field force and air army. All questions of air support for the defensive actions of a tank field force were carefully coordinated and clarified with the commanders and staffs of the air formations cooperating with the tank army.

For achieving clear and effective cooperation, at the command (observation) post of the tank army there was an operations group headed by the commander of the air corps (division) and he was the senior air representative in the tank field force. Thus, the commander of the I Ground Attack Air Corps was at the command post of the 5th Guards Tank Army in the Korsun-Shevchenkovskiy Operation.(12) On the Sandomierz bridgehead (Lwow-Sandomierz Operation), for the closer cooperation of the formations from the 2d Air Army with the ground troops, its operations group was located at the joint observation post of the commanders of the 13th Army and the 3d Guards Tank Army.(13)

With the going over of the enemy to the offensive, basic attention was given to defeating it on the approaches to the forward edge by weapons positioned in the main defensive zone. This task was carried out most effectively in those tank armies where reconnaissance was carefully organized and fire prepared on the approaches to the defenses. For example, the command of the 5th Guards Tank Army (Belgorod-Kharkov Operation) even before the start of the fighting established that the main forces of the SS Tank Division Reich were concentrated 2 km from the forward edge and were ready to launch an attack.(14) On 14 August 1943, as was assumed, the enemy began the offensive in the morning. With the approach of the enemy tanks and infantry to the forward edge, the artillery from covered firing positions opened up with barrage fire against previously designated lines. As the enemy approached the forward edge of the defenses, the tanks, SAU and antitank artillery joined battle against it. Having put up stubborn resistance against the units of the SS Tank Division Reich, the army's first-echelon formations forced the enemy to abandon its further offensive.(15)

The successful outcome of the clash with the enemy depended largely upon the ability of all levels of commanders to combat large enemy tank groups. An example of this would be the unique employment of weapons in repelling tank assaults ahead of the forward defensive edge of the 3d Guards Tank Army in the Kiev Operation. Even before going over to the defensive it had been established that heavy tanks were in the first echelon of the enemy tank groupings, medium and light tanks in the second and motorized infantry in the third. The task of the enemy heavy tanks included the neutralizing of our antitank weapons. The medium and light tanks and the motorized infantry were to breach the battle formations of the defending troops and continue the offensive in depth. Since such a method of employing combat vehicles had repeatedly brought the enemy success, it was essential to disrupt cooperation between its tank echelons and halt their advance. For this purpose the heavy tanks were hit first by the fire of the SAU and antitank artillery. With the shortening of the distance between the enemy and the forward edge to 700-800 m, fire was opened up simultaneously against all three echelons. The SAU

hit the enemy heavy tanks, the tanks (T-34), the antitank artillery and the rocket artillery battalions (M-8, M-13) hit the medium and light tanks while the mortars fired at the infantry mounted on armored personnel carriers.(16) Such a method of repelling advancing enemy troops produced good results.

Beginning with 1944, due to the high losses in heavy tanks, the Nazi Command altered the procedure for their employment. In the Korsun-Shevchenkovskiy, Lublin-Brest and Lwow-Sandomierz Operations, in preparing the tank assaults, the Nazi Command put not the heavy tanks in the first echelon but rather a small group of light and medium combat vehicles which attacked on a broad front. Their task was to draw the fire of the antitank weapons. As soon as the light and medium tanks approached the forward edge of the defenses, the heavy tanks engaged our antitank weapons in a fire fight, firing from a range of up to 1.5-2 km at the detected antitank weapons. After neutralizing the antitank defenses, the main forces of the tank grouping (medium and heavy tanks) went over to the assault.

The Soviet Command, having discovered this enemy tactics, opposed it with its own method of action. For example, in defending the Sandomierz bridgehead, upon instructions of the Commander of the 3d Guards Tank Army, Col Gen Tank Trps P.S. Rybalko, the "scout" tanks were fired upon by on-call antitank weapons which were specially assigned to hit them. With the going over of the enemy main forces to the offensive, long-range artillery made fire strikes against enemy tanks and motorized infantry. When the attacking enemy entered the range of effective fire from the other antitank weapons, the enemy tanks were engaged by the SAU, tanks and antitank artillery positioned in antitank strongpoints. Fire from antitank rifles was conducted against them immediately before the main defensive zone.

The maneuvering of men and weapons was widely employed by the tank armies in the course of combating the enemy in the main defensive zone and in eliminating an incursion of enemy troops. The aims of the maneuvering varied and depended upon the existing conditions. As a rule, the tank, artillery and motorized rifle units and formations maneuvered in the aim of stiffening the resistance to the enemy on the breakthrough sectors of enemy troops, for reinforcing the first-echelon formations on the defensive and for concentrating men and weapons to carry out counterstrikes.

In the course of the defensive engagements by the tank armies in 1943, men and weapons were maneuvered chiefly by moving up the tank reserves of the armies and corps from in depth. In approaching the areas of an enemy incursion, they took up the defensive and repelled the enemy assaults by firing from a halt.

The maneuver played a very substantial role in stiffening the resistance shown to the enemy. Moreover, in repelling strikes by groupings which had broken through and in causing them harm, the activeness of enemy offensive actions declined (3d Guards Tank Army in the Kiev Operation) and in certain instances (the 5th Guards Tank Army in the Belgorod-Kharkov Operation) it completely broke off the offensive.

Maneuvering of men and weapons was carried out significantly more widely in the defensive battles of the tank armies in the concluding stage of front offensive operations in 1944-1945 and this was aided by the experience gained

in combating the enemy counterstrike groupings. All of this permitted the commanders of the tank armies to mass men and weapons more decisively not only by the extensive maneuvering of all types of reserves but also by drawing on the subunits, units and even formations removed from unattacked sectors and secondary areas. In addition, the reinforcing of the tank armies with front reserves helped to increase the number of men and weapons on the main sectors.

The high activity of the tank army defensive was manifested in the launching of counterstrikes against wedged-in enemy groupings not only during the day but sometimes at night (3d Guards Tank Army in the Lwow-Sandomierz Operation). In the course of the commenced defensive engagements, counterstrikes were readied, as a rule, in a short period of time. Their organization required great efficiency and creativity in the work of the army commanders and their staffs. The decision to conduct counterstrikes was taken by the army commanders during the first or second day of the defensive engagement, before the enemy had succeeded in widening the wedge along the front and in depth and the offensive of its grouping had been held up in the course of the fighting for the main defensive zone.

Involved in the launching of counterstrikes were the general reserves and the formations of the first echelon as well as the second echelon (if created) of the tank armies and formations removed from unattacked areas and secondary zones. Usually the counterstrikes were launched after brief but powerful shelling by the artillery on the move (2d Tank Army in the Lublin Brest Operation, 3d Guards Tank Army in the Lwow-Sandomierz Operation) or after the brief taking up of the initial position (6th Tank Army in the Korsun-Shevchenkovskiy Operation).

Usually as a result of the defensive engagements by the tank armies, the enemy troops abandoned the offensive on the previously chosen axes or went over to the defensive.

* * *

Thus, the experience of the Great Patriotic War showed that the tank armies which played the main role in developing a tactical breakthrough into an operational one, in the course of the offensive also successfully carried out defensive tasks. The methods employed by them in organizing and conducting the defensive have largely kept their importance under present-day conditions. As before, for the tank formations and units, still pertinent are such questions as: choosing the moment to go over from the offensive to the defensive and its rapid preparation under the conditions of direct contact with the enemy, the prompt adopting of a plan and the issuing of tasks to the troops, the regrouping of men and weapons and their massing on the axis of the enemy's main thrust, and the establishing of an effective fire plan for the artillery, tanks and SAU and a system of man-made obstacles.

Also of practical interest is the organization and execution of counterstrikes against an enemy which has broken in.

The creative employment of the experience of organizing and conducting the defensive by tank armies in the course of front offensive operations will help to increase the combat readiness of the Ground Troops today.

FOOTNOTES

1. Calculated from data of the TsAMO SSSR [Central Archives of the USSR Ministry of Defense]: folio 299, inv. 37805, file 4, sheet 7; folio 299, inv. 21015, file 1, sheet 17; folio 299, inv. 17253, file 10, sheets 72-75; folio 315, inv. 4442, file 40, sheets 1-39; folio 240, inv. 50184, file 10, sheets 175-178; folio 307, inv. 148, file 40, sheets 175-178; folio 307, inv. 4148, file 196, sheets 46-47; folio 315, inv. 4440, file 289, sheets 42-50.
2. See Table 1.
3. TsAMO, folio 307, inv. 4148, file 196, sheets 46-47.
4. Ibid., folio 300, inv. 7498, file 3, sheet 93.
5. Ibid., folio 315, inv. 4440, file 4, sheet 107.
6. Ibid., file 341, sheets 5-57.
7. Ibid., folio 236, inv. 13428, file 7, sheets 132-135; folio 240, sheets 132-135; folio 240, inv. 25789, file 16, sheets 278-281.
8. See Table 2.
9. TsAMO, folio 236, inv. 360916, file 1, sheet 20.
10. Ibid., folio 332, inv. 4948, file 154, sheets 4-30.
11. Ibid., folio 240, inv. 15789, file 16, sheets 278-281.
12. Ibid., folio 315, inv. 4999, file 82, sheets 41-42.
13. Ibid., folio 236, inv. 366916, file 1, sheet 20.
14. Ibid., folio 223, inv. 50664, file 9, sheet 180.
15. Ibid., folio 328, inv. 4854, file 11, sheets 22-23.
16. Ibid., folio 315, inv. 4440, file 330, sheet 45.

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AIR DEFENSE OF LINES OF COMMUNICATIONS DURING GREAT PATRIOTIC WAR

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 44-49

[Article by Col (Res) R.I. Pigasov: "Air Defense Lines of Communications During the Great Patriotic War"]

[Text] During the years of the Great Patriotic War, great attention was given to air defense of the lines of communications (particularly rail and water) which were employed to move troops, as well as deliver weapons and military equipment, ammunition, fuel, food and other materiel. The enemy endeavored to paralyze the operational movements by every means. About 25 percent of the total number of aircraft overflights counted in the zones of responsibility of the field forces and formations of the National Air Defense Troops during the war years was made by Nazi aviation in the aim of attacking objectives of the front lines of communications.(1) For this reason the cover for the rail junctions and stations, the railroads and highways, bridges, crossings, waterways and ports, troop trains and ship convoys en route was one of the main tasks of the National Air Defense Troop.

The railroads played a particular role in supporting the requirements of the troops. They made up for over 70 percent of the movements of military cargo and personnel on the continent (the total volume exceeded 19 million carloads). Nazi aviation made around 20,000 raids against the rail lines of our nation, dropping more than 250,000 various bombs in this.(2)

By the start of the war, all the main railroad junctions, stations and bridges a distance of up to 500-600 km from the western frontier were covered by air defense weapons. Major junctions (Velikiye Luki, Vitebsk, Smolensk, Gomel, Baranovichi, Grodno, Shepetovka and so forth) were covered by antiaircraft artillery regiments. Air defense for stations and bridges was provided by separate antiaircraft artillery battalions armed with medium-caliber weapons (SZA) and small-caliber weapons (MZA), antiaircraft machine guns and searchlights.

Encountering heavy resistance during the first days of the war from the air defense weapons around the railroad junctions, stations and bridges, the enemy began to attack undefended small stations, sidings as well as troop trains en route. For protecting such installations, they began organizing special

maneuvering groups which included SZA and MZA batteries as well as antiaircraft machine gun subunits. The groups usually operated from an ambush and this was a new form in the combat employment of antiaircraft weapons.

The antiaircraft armored trains played an essential role in covering railroad facilities. As a total during the war years there were around 200 of them. The armored trains were armed with three 76-mm caliber guns, two 37-mm cannons and three large-caliber antiaircraft machine guns.(3) For protecting the trains, antiaircraft artillery escort groups were also established. Each of these was located on a separate flatcar (gondola) and possessed, as a rule, a small-caliber gun and an antiaircraft machine gun. The flatcars were incorporated in the railroad consist at three places (at the head, in the middle and at the tail).

Fighter aviation also participated in carrying out the task of air defense for the lines of communications. For example, the cover for the Kirov Railroad was provided by units from the Murmansk Air Defense Divisional Region and the 122d Air Defense Fighter Division attached to it. After the collapse of the plans to seize Murmansk and the Kirov Railroad, the Nazi Command attempted, in employing aviation, to disrupt the normal operation of the main line. Here as the main objective of its actions, the enemy chose the Loukhi--Kandal'sksha sector some 164 km long. For strengthening the cover of the railroad sector, the region's command quickly shifted here seven SZA and MZA batteries and three platoons of antiaircraft machine guns to supplement the existing two MZA batteries and the antiaircraft machine gun company. A portion of the forces was employed for air defense of the stations and sidings of Knyazhnaya, Kovda, Polyarnyy Krug and others, and a portion was incorporated as part of the maneuvering groups. In addition, five groups were established for escorting trains en route, and each of these groups was armed with several MZA guns and two or three large-caliber antiaircraft machine guns. The aviation subunits operated using several methods: "airfield alert," continuous patrolling in designated areas as well as patrolling during the assumed time that enemy bombers would appear.

The adopted measures produced positive results. During 1943, units of the Murmansk Air Defense Divisional Region and the 122d Air Defense Fighter Division destroyed 139 aircraft and hit 30.(4) The air defense groups participated in the cover of 882 trains, of which only 18 sustained insignificant damage. In repelling the air strikes, the antiaircraft gunners downed 30 aircraft and hit 14.(5) The attempt by the enemy to put the Kirov Railroad out of operation failed.

In organizing air defense for the front lines of communication on the Kursk Salient, the experience of the first period of the war was considered. Hq SHC entrusted the carrying out of the task to units of the Ryazhsk--Tambov, Voronezh--Borisoglebsk, Kharkov and Tula Air Defense Divisional Regions and to the 36th, 101st, 125th and 310th Air Defense Fighter Divisions which were subordinate to them. The involvement of such an amount of air defense weapons was caused by the complexity of the situation, by the make-up of the opposing Nazi air grouping and by its high activity. The Nazis had up to 1,100 aircraft, including 900 bombers, at just the Smolensk, Orel and Kharkov airfield centers.(6)

The air defense system of the Kursk Salient was marked by a number of features which were caused by the presence of a large number of railroad installations and their proximity to the front line. For this reason, operational groups were established for rigidly centralizing control over the air defense formations and units in the individual regions. For example, the Kursk Air Defense Operational Group (chief, Col V.S. Gavrilov) included antiaircraft units of the National Air Defense Troops defending Kursk and installations on the Kastornaya--Kursk railroad section as well as three regiments of the 101st Air Defense Fighter Division under the command of the division's chief of staff, Col N.I. Slashchuk. A particular feature of the organization was that the men and weapons from this group operated in a single zone with the antiaircraft and fighter units of two fronts, the Central and Voronezh.

The joint efforts of the organic air defenses, the fighter aviation of the fronts and the units of the operational group made it possible to combat the enemy bombers over their entire flight to the objectives. The principle of allocating combat zones was used as the basis of cooperation between the fighter aviation of the fronts and the air defense fighter aviation. The front fighters, in being based at forward airfields, met the enemy aircraft at the distant approaches. Later the subunits of fighter aviation from the air defense operational group joined combat. The antiaircraft artillery operated directly in the areas of the covered objectives. The entry of the fighters into the zone of antiaircraft fire was prohibited, with the exception of instances of completing an attack. Cooperation of the fighter aviation with antiaircraft artillery was carried out according to a previously elaborated planning table the data of which were issued to all pilots and antiaircraft subunit commanders.

A new feature in the employment of fighter aviation was the assigning of certain railroad sectors to aviation regiments. Fighters patrolled continuously over objectives close to the front line. With the appearance of Nazi aircraft, duty subunits also scrambled from nearby airfields. They were guided by radar to the air targets.

The staff of the air defense operational group maintained close contact with the chiefs of the rear services and the sections of military railroads [VOSO] of the fronts. As a result, the command of the operational group had constant information concerning the movement of the trains and this made it possible to promptly organize their cover.

Due to such an organization, the National Air Defense Troops in cooperation with the fighter aviation and antiaircraft artillery of the fronts, thwarted the plans of the Nazi Command to put the railroads on the Kursk sector out of operation. Enemy aviation was unable to disrupt the operational regroupings and supply of the fronts. By the start of the Nazi offensive, over 468,000 railway cars had been delivered to the area of the Kursk Salient. The total volume of shipments in the Kursk Operation was around 540,000 carloads and this greatly surpassed the volume of shipments in the course of the engagements at Moscow and Stalingrad.(7)

The amount of forces from the National Air Defense Troops involved in covering the frontline lines of communications increased continuously in the course of the war. Thus, on 1 October 1944, the carrying out of this task involved 34 percent of the fighter aviation, over 32 percent of the medium antiaircraft artillery and over 54 percent of the small-caliber. In comparison with the start of 1942, the number of SZA rose by 5-fold, the MZA by 22-fold, the large-caliber antiaircraft machine guns by 16-fold and searchlights by 18-fold.(8)

During the first period of the war, the Ladoga water (in the winter, ice) link assumed particular importance and over this ships and vessels from the Ladoga Naval Flotilla and its subordinate Northwestern River Navigation Company delivered troops and diverse cargo to besieged Leningrad and on the return trips evacuated people. With the start of the shipments, enemy aviation began to oppose the movements and each day the strength of the attacks grew. For defending the Ladoga sea link against air attacks, in September 1941, a brigade (from August 1942, divisional) air defense region was established and this included antiaircraft artillery, machine gun and other units and subunits. Fighter subunits were assigned from the VII Air Defense Fighter Corps (the Leningrad Air Defense), the Air Forces of the Leningrad Front and the Red Banner Baltic Fleet, and the chief mission of these fighters was to repel enemy raids on the Ladoga route. Air defense weapons mounted on ships of the Ladoga Naval Flotilla also participated in combating aviation. For protecting the Lifeline in the winter, the MZA and the antiaircraft machine guns were mounted along the route directly on the ice. Regardless of their small number, they rather effectively resisted the enemy bombers and prevented accurate bombing as 85 percent of the dropped bombs fell away from the road. Transport losses were insignificant.

Air defense of the Ladoga water link was a component part in the defensive system of the besieged city (this was a particular feature of it). For this reason all the air defense forces were under the commander of the Leningrad Front. Here the National Air Defense Troops for the first time had to defend a strategic transport artery in close cooperation with the air defense forces of a front, a fleet and a flotilla.(9)

The prompt and precise organization of air defense for the Ladoga water link made it possible to continuously supply the blockaded city with food products, fuel, military equipment and ammunition. Over the first navigation season (September-November 1941), Leningrad received 60,000 tons of cargo and more than 38,000 persons were evacuated from it.(10) During the winter of 1941-1942, over 360,000 tons of cargo were shipped into the city. Over the 194 days of the 1942 summer navigation season more than 1 million tons of cargo and over 1 million persons (including 250,000 who replaced the troops of the front and the fleet) were delivered to Leningrad and back to Soviet-held territory.(11)

In the second half of 1942, the air defenses of the Volga Waterway assumed major importance. After the enemy had seized the southern railroad, the supply of the Stalingrad Soviet troop grouping and the transporting of oil products from the Caucasus to the central regions of the nation began to be carried out over the Volga. In line with this the Nazi Command gave its

aviation the mission of paralyzing Soviet ship traffic in the lower courses of the river, to stop shipments and supply of the fronts on the defensive and thereby ensure success for its troops pushing toward Stalingrad and the Volga. It concentrated more than 1,200 aircraft, including 780 bombers, on the Stalingrad sector.(12)

Hq SHC entrusted air defenses of the Volga Waterway to units of the Stalingrad Corps Air Defense Region, the Saratov and Astrakhan Divisional Air Defense Regions. For providing a cover for ship convoys and individual steamships, a special operations group was organized of floating air defense weapons (a total of around 300 MZA and machine guns).

Each convoy, in addition, was escorted by two or three launches from the Volga Naval Flotilla and each vessel carried 2-6 antiaircraft guns and 3-6 machine guns. The adopted measures reduced the effectiveness of the enemy air raids.

Air defense of the Volga Waterway was carried out within the overall strategic task being realized by the Soviet Command on the Stalingrad sector. In line with this particular feature, the Stalingrad Corps Air Defense Region and the Volga Naval Flotilla in operational terms were put subordinate to the commander of the Stalingrad Front. Their effective use made it possible to securely cover the movements and ensure the continuous resupply of the defending troops with personnel and everything necessary. For example, just during the period from 1 through 20 November 1942, more than 160,000 soldiers and officers, 430 tanks, 600 guns, 14,000 motor vehicles, 6,700 tons of ammunition, around 4,000 tons of food and several thousand tons of other freight were moved across the Volga over ferry crossings and bridges.(13) The Volga Naval Flotilla over September-November delivered to Stalingrad some 65,000 soldiers, 2,500 tons of various cargo and evacuated more than 30,000 wounded and tens of thousands of the civilian population.(14)

During the war years serious attention was given to defending the northern sealanes over which strategic raw materials, weapons and food were delivered to the nation by the Allies in the anti-Nazi coalition. In the aim of preventing the shipments, the Nazi Command concentrated a large number of submarines, surface vessels and aircraft at bases and airfields in Northern Norway. Such basing permitted enemy aviation to attack ships and transports along their entire route.

All available forces of ships and aviation from the Northern Fleet participated in defending the Allied convoys. Moreover, during a period of intensive convoy traffic, the carrying out of this mission also involved air force units (from November 1942, the 7th Air Army) from the Karelian Front and the 122d and 104th Air Defense Fighter Divisions attached, respectively, to the Murmansk and Arkhangelsk Divisional Air Defense Regions. Here the air formations and units from the various Armed Services in operational terms were subordinate to the commander of the Northern Fleet Air Forces. For realizing their cooperation with the ground air defenses, a single plan was drawn up and joint command posts organized.

The dependable cover of the waterways against enemy air strikes made it possible for the maritime and river transport to carry during the war years

more than 4.3 million officers and soldiers, 10,600 guns, 4,600 tanks, 48,900 motor vehicles and over 22 million tons of cargo.(15) The river flotilla forces transported around 2.5 million men.

Among the tasks carried out by the National Air Defense Troops an important place was held by air defenses of crossings. This was particularly characteristic for the third period of the war, when the Soviet Army was conducting major offensive operations. During the period of the crossing of water obstacles by the troops and the capturing of bridgeheads, air defenses for the crossings were provided, as a rule, by the organic air defense. With the going over of the troops to the offensive, units and formations of the National Air Defense Troops began to be involved in carrying out this mission, being withdrawn from covering objectives beyond the range of enemy aviation. Here the amount of involved weapons varied. For example, the crossings over the Dnieper in the Kiev area in the autumn of 1943 were covered by 150 fighters, over 350 antiaircraft guns, 72 antiaircraft machine guns and other air defenses.(16) In April, 1945, for protecting the crossings over the Oder, just in the zone of the First Belorussian Front, some 530 antiaircraft guns and 237 antiaircraft machine guns from the V Air Defense Corps and 120 aircraft from the 148th Fighter Air Defense Division were assigned.(17)

In launching attacks, the Nazi aviation most frequently employed the tactics of massed raids from different directions. The attacks were carried out from low and medium altitudes coming in at angles of 45-50 degrees to the longitudinal axis of the crossing. For this reason the antiaircraft artillery grouping was positioned so as to conduct an all-round defense. In protecting several crossings located a short distance apart, the plan of antiaircraft artillery fire was a general one. It envisaged the setting of heavy curtains of barrage fire, and firing at divebombers and low-altitude airborne targets. Groups of air defense fighters patrolled in the set zones and when prompt warning was provided, intercepted enemy aircraft from an "airfield alert" status.

Hq SHC was the organizer of the cover for all frontline lines of communications. It opposed the massed Nazi air raids by massing the forces of the National Air Defense Troops which carried out the missions assigned to them in close cooperation with the fighter aviation and antiaircraft artillery of the fronts, fleets and flotillas. The establishing of large air defense groupings ensured normal operation of key transport objectives. The principle of allocating zones between the antiaircraft artillery and fighter aviation underlay the cooperation of the air defense forces. The assigning of railroad and subsequently water sections (zones) to the fighter aviation units was new in the tactics of their employment.

The maneuvering antiaircraft artillery groups and the train escort groups fought effectively. However, control over the latter was difficult. In line with this, at the start of 1944, all the separate subunits assigned to escort trains were put completely under the VOSO bodies of the Soviet Army. In organizational terms they were first put into regiments and separate battalions. On 1 March 1944, under the VOSO bodies were 10 regiments having 40 platoons each and 12 separate battalions with 20 platoons each. Air defense sections were established for directing them as part of the

headquarters of the VOSO chiefs of the fronts. Such a reorganization improved the command and employment of the platoons for covering the trains.

In the course of the war, air defenses for the lines of communications were organized according to a single plan which clearly set out the procedure of action for each branch of troops, formation and unit. Depending upon the situation, the air defense forces of the fronts, fleets and flotillas were put subordinate to the air defense command (Ladoga, Murmansk and so forth) or to the commander of the fronts (Leningrad, Stalingrad). This made it possible to employ them more effectively. The continuity and flexibility of command over the diverse air defense forces were maintained by the operational groups. Coordination of the latter with the VOSO bodies of the fronts made it possible to prevent the destruction by enemy aviation of much valuable freight, railroad rolling stock, vessels and other water crossing equipment.

The experience of air defenses for the lines of communications during the years of the Great Patriotic War has not lost its importance at present. It is the basis for the further development of the operational art and tactics of the Air Defense Troops. A thorough study and creative employment of this in the practical work of the commanders and staffs help in effectively carrying out the tasks of improving air defense.

FOOTNOTES

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 72, inv. 12275, file 575, sheet 2.
2. "Tyl Sovetskoy Armii" [Soviet Army Rear], Moscow, Voyenizdat, 1968, pp 273, 274.
3. VOYENNO-ISTORICHESKIY ZHURNAL, No 4, 1979, p 31.
4. TsAMO, folio 741, inv. 708614, file 1, sheet 219.
5. Ibid., folio 211, inv. 35233, file 8, sheets 167-180.
6. Ibid., folio 7, korp. PVO, inv. 708619, file 1, sheet 52.
7. "Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuza 1941-1945" [History of the Great Patriotic War of the Soviet Union of 1941-1945], Moscow, Voyenizdat, Vol 3, 1964, p 196.
8. "Voyennoye iskusstvo vo vtoroy mirovoy voynye (strategiya i operativnoye iskusstvo)" [Military Art in World War II (Strategy and Operational Art)], Moscow, Voyenizdat, 1973, pp 509, 510.
9. The length of the water route across Lake Ladoga from the Ports of Novaya Ladoga (major route) and Kobona (minor route) to the Port of Osipovets was, respectively, 135 and 35 km. The ice route from Kobona to Kokarev and Vaganov was around 30 km long ("Sovetskaya Vojennaya Entsiklopediya" [Soviet Military Encyclopedia], Moscow, Voyenizdat, Vol 3, 1977, p 249).

10. VOYENNO-ISTORICHESKIY ZHURNAL, No 1, 1973, p 82.
11. "Istoriya Velikoy Otechestvennoy...," Vol 2, 1963, p 473.
12. TsAMO, folio 9, inv. 708621, file 1, sheet 11.
13. Ibid., folio 220, inv. 496, file 16, sheet 9.
14. "Istoriya Velikoy Otechestvennoy...," Vol 3, p 22.
15. "Tyl Sovetskoy Armii," p 277.
16. TsAMO, folio 231, inv. 210367, file 20, sheet 21.
17. Ibid., folio 211, inv. 35234, file 69, sheet 39.

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FUEL SUPPLY FOR FRONTS IN THIRD PERIOD OF GREAT PATRIOTIC WAR

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[Article by Lt Gen I.N. Bazanov: "Fuel Supply for Fronts in the Third Period of the Great Patriotic War"]

[Text] During the third period of the Great Patriotic War, the Fuel Supply Directorate (USG) of the Soviet Army gained rich experience in organizing the supply fuel to the troops in major strategic offensive operations. The characteristic traits of these operations were: the growing technical equipping of our troops, the high rate of advance of the formations and units, particularly the tank and mechanized, the significant distance of the troops from the front supply bases and the front rear services from the supply bases in the interior of the nation, the shortening of the length of the operational pauses between the front operations and the conducting of active continuous combat operations by the Soviet troops on a strategic scale. All of this had direct bearing on the work of the fuel service.

First of all, there was an increased bulk (volume) of fuel consumed on the front. Thus, in the Berlin Operation, the three front (First and Second Belorussian and First Ukrainian) as an average consumed 8,800 tons of fuel a day, that is, approximately 2,933 tons per front, while during the counteroffensive at Stalingrad the average daily fuel consumption of the three fronts (Southwestern, Don and Stalingrad) during the period from 19 through 30 November was just 1,058 tons or an average of 353 tons per front.(1) Thus, the average daily fuel consumption calculated per hypothetical front over a period of 2 1/2 years rose by more than 8-fold. As a whole fuel consumption rose on all actively operating fronts.

As the Soviet troops moved west, the fuel supply for them in each new operation became greater in terms of the bulk (volume) of the fuel as well as in terms of the distance shipped and often went beyond the capabilities of the USG, becoming a problem of strategic leadership. Instructive from the viewpoint of supplying the fronts with fuel is the experience of the Belorussian Offensive Operation.

In preparing for the operation the State Defense Committee [GKO] ordered the People's Commissariat of Defense [NKO] by 1 June 1944 to establish in the

First, Second and Third Belorussian Front fuel supplies amounted to 20 fuel loads of aviation gasoline, 15 loads of tank fuel (KB-70 gasoline and diesel fuel) and 10 loads of gasoline. Subsequently there were plans to establish the following supplies in the First Baltic Front: 6,900 tons of aviation gasoline, 10,900 tons of motor vehicle gasoline and 2,900 tons of diesel fuel.(2) By a GKO decree, the designated fronts received from the mobilization reserve some 71,000 tons of fuel and from the state reserves, 19,500 tons. By reducing the May allocations for the national economy, the NKO was able to provide another 11,500 tons of fuel. Moreover, the First, Second and Third Belorussian Fronts and the First Baltic Front received directly from the industrial enterprises some 57,200 tons of fuel from the NKO allocations.(3)

The fuel supplies established by the GKO on the Belorussian fronts were organized by 1 June, and in the First Baltic Front by 22 June 1944. But since weapons and equipment were being delivered to the fronts continuously, the weight of the fuel load set in the calculations by the start of the operation had increased by 27 percent for the high-octane aviation gasoline, by 40 percent for the motor vehicle gasoline and by 22 percent for the diesel fuel. Naturally, the fuel supply situation on the fronts as measured in fuel loads deteriorated. Moreover, a portion of the fuel assigned to establish supplies was consumed by the fronts in preparing for the operation. As a result of this the set supply standard (in fuel loads) could not be made up(4) (see the table).

Fuel Supply Situation for Fronts at Start of Operation
(in fuel loads)

Front	Aviation Gasoline	Motor Vehicle Gasoline	Diesel Fuel
First Belorussian	4.0	4.1	7.1
Second Belorussian	10.4	2.5	6.4
Third Belorussian	6.2	3.4	6.3
First Baltic	9.2	4.1	7.6

From the table it can be seen that the fronts had: an average of almost 40 percent of the established level of high-octane gasoline, approximately 35 percent for the motor vehicle gasoline and around 50 percent for the diesel fuel. Thus, the delivery of motor vehicle gasoline caused particular concern. It must be considered that during this period one load of motor vehicle gasoline provided a run of the motor transport of just 150 km and this meant that in having three fuel loads in reserve, a motor vehicle could travel not more than 150 km. If it is also considered that a majority of the motor vehicles hauled materiel, that is, made two trips there and back, their capability was even lower.

For fuel storage they used not only the mobile tanks of the front and army field dumps and the containers of the troops, but also rebuilt permanent tanks of the district fuel dumps and local oil depots. Due to the serious

organizational work of the rear services of the fronts on the First Belorussian Front, for example, they repaired the tanks of five permanent dumps with a capacity of 12,600 tons of fuel, while the Third Belorussian Front rebuilt the tanks of three oil depots and dumps for 6,100 tons of fuel.(5)

The fuel supplies on the fronts were established chiefly by delivery from the interior of the nation as well as by the strictest economy in fuel consumption on the spot. Even on 5 September 1943, the GKO adopted a decree in which the commanders of the fronts and armies were ordered to plan the employment of equipment and weapons in the operations in precise accord with the established fuel consumption limits. In line with this an extensive campaign to save fuel commenced in the troops. The greatest effect was achieved where the commanders organized the correct operation of the motor vehicle fleet in delivering materiel. For example, it was prohibited without special permission to take motor transport beyond the rear limits of the fronts and armies. The introduction of a rigid motor vehicle hitch (towing) became widespread. An average of up to 50 percent of all the transport trucks and for certain fronts over 70 percent of the vehicles employed for mass shipments were operated in precisely this manner. Due to this on the Second Belorussian Front this saved, for example, 247 tons of gasoline. In the struggle to save and economize on fuel and lubricants an important role was played by the front and army conferences of specialists from different services: motor vehicles, road and fuel supply. Here the best specialist soldiers and drivers shared their experience in saving fuel under diverse weather conditions and on obstructed sectors of roads.

In the course of the operation, the demand for fuel in line with the increased length of transporting increased constantly and its delivery to the fuel by rail transport did not cover consumption. For this reason the Staff of the Soviet Army Rear Services and the USG adopted a number of emergency measures to dispatch fuel to the fronts by the motor transport of the center. For example, at the end of July, the Third Belorussian Front was sent four motor vehicle battalions with fuel. The USG dumps prepared to dispatch 1,075 tons of fuel in barrels. When the tank and mechanized corps reached deep into the enemy rear, it was impossible to supply them with fuel by motor transport. For this reason they began to employ the LI-2 and PO-2 air transports for this. Fuel was delivered in parachute-dropped barrels (PDB-100), and with the landing of the aircraft, in regular barrels. On the Third Belorussian Front, for example, aircraft supplied the forward units with 380 tons of different types of fuel, and on the First Belorussian Front 608 tons of different fuel.(6)

The problem of fuel delivery was particularly aggravated during the period of the concluding operations of the Great Patriotic War. As the Soviet troops advanced to the west, the transport distance increased and, consequently, the turnaround time of the tank cars between the oil refineries and the Volga transloading depots, where the fuel was delivered from Baku, and the railheads of the fronts. The situation was also exacerbated by the delayed return to the rear of tank rolling stock which was frequently employed on the fronts as mobile fuel dumps. The chief of the rear services of the First Belorussian Front, Lt Gen N.A. Antipenko, thus explained the hold-up of the tank cars with

fuel: "...The hold-up of a day or two occurred due to the fact that we were waiting for the opening of train traffic on the head railroad section. In moving a tanker train 100-150 km closer to the troops, we saved at least 1,000-1,500 tons of gasoline. Each time we had to think whether we should unload the gasoline 300 km from the troops in order to return the tank cars faster or wait a day or two until the railroad was repaired and thereby shorten the run of tank trucks by 100-150 km.(7)

With the moving of combat into the territory of adjacent states, new difficulties arose in the delivery of materiel. Due to the difference in the railroad gauges on Soviet territory and in these countries, the rear services of the fronts had to additionally organize the transloading of fuel at the border stations and certain of the most important railroad sections even had to be regauged to the Soviet width. Fuel delivery was also complicated by the fact that in the zones of advance of the fronts there were major water obstacles running laterally and the bridges across these had been destroyed by the enemy. This seriously impeded the organizing of through rail traffic on the lines of communications.

In accelerating the turnaround of the railroad tank cars, an important role was played by employing railroad "shuttles" for delivering fuel to the fronts and consisting of 20-25 four-axle tank cars each. The "shuttles" were assigned numbers and also assigned to definite fronts where they traveled from the fuel loading point to the railhead and back.

For accelerating the delivery of fuel to the operational army, on the railroads which were not in the frontline area each month they organized 40-50 "reserved" trains of empty cars which were dispatched to the fuel loading points in the interior of the nation and from here traveled to the fronts. In the necessary instances they also employed the so-called lighter trains which were introduced under agreement between the TsUPVOSO [Central Directorate of Military Railroads] and the NKPS [People's Commissariat of Railroads]. Due to all of this, the traveling speed of the trains carrying fuel during the concluding operations in certain instances approached 600-700 km a day. This was a major accomplishment for those times.

By the GKO Decree "On Measures to Accelerate the Turnaround of Tank Cars" adopted on 19 October 1943, trains carrying fuel were given priority over all other trains. The time for redirecting consists carrying fuel to the railheads of the fronts was strictly limited. The military councils of the fronts were obliged to reallocate them within an hour from the moment of arrival. Tank cars were permitted to remain not more than 4 hours in unloading. The adopted measures significantly accelerated the turnaround of the tank cars.

Water transport was also widely employed for hauling fuel, particularly after the liberation of Odessa, where fuel began to be delivered by tanker from Batumi and Tuapse. As a result, the distance traveled by the railroad tank cars was significantly shortened. The routing of the cars carrying fuel, particularly the "shuttles," and "reserves" consists were strictly monitored by the VOSO [Military Railroads] and fuel service bodies.

On the territories of Romania, Bulgaria and Hungary, the Nazi troops, in retreating hurriedly, as a rule, did not succeed in greatly damaging the railroads. Here there was a large number of tank and other cars which created good conditions for transport. Nevertheless, due to the differing width of the railroad gauges there were difficulties along both sides of the Soviet-Romanian frontier. In order to more efficiently deliver fuel to the Second and Third Ukrainian Fronts, in the autumn of 1944, they organized the transloading of the fuel from one type of transport to another. Fuel for the Third Ukrainian Front (chief of the fuel supply section, Maj Gen Tech Trps I.B. Igritskiy) was delivered in railroad tank cars to the Port of Izmail. Here gasoline pumping stations moved it to tanker barges. At the Romanian port of Tulcea the fuel was pumped out of the barges into Romanian tank cars and moved by Western European gauge railroads to the destinations: to the front and army dumps. The moving of fuel across the Romanian-Bulgarian frontier between the Danubian ports of Giurgiu (Romania) and Ruse (Bulgaria) was carried out without transloading in tank cars on a rail ferry.

In the course of the 1945 winter campaign a difficult situation with fuel supply arose in the rear of the Third, Second and First Belorussian Fronts and the First Ukrainian Front. The chief of the fuel supply section of the Second Belorussian Front, Gen A.G. Kovyrzin, in reporting on this question to the chief of the Soviet Army USG, Gen M.I. Kormilitsyn, pointed out that a major difficulty in supply was created by the transloading of fuel from the Soviet to the Western European railroad gauge. There were no tank cars of the Western European gauge. The "shuttles" were organized using small containers from the front and army dumps and loaded on flatcars. They moved extremely slowly, some 80-100 km a day. Approximately the same situation had arisen on the other fronts fighting on Polish territory. For this reason the only correct solution which would ensure continuous delivery of materiel, including fuel, to these fronts was the respiking of the main lines to the Soviet gauge. Thus, by the start of the Berlin Operation, materiel, chiefly ammunition and fuel, were delivered to the First Belorussian Front basically along the frontal railroad line of Brest--Warsaw--Poznan--Frankfurt-am-Oder which had been respiked to the Soviet gauge. In the area of the First Ukrainian Front, the main line of Przemysl--Krakow--Breslau (Wroclaw) had been respiked. Transloading depots were located on both railroads. Fuel was carried in Soviet tank cars to the head stations where the transloading depots were located. Here it was reloaded to the front "shuttles" made up of captured tank cars and flatcars with tanks mounted on them and these moved further along the Western European gauge.

Fuel was moved across water obstacles over field pipelines. Thus, on the Second Belorussian Front in the course of the East Pomeranian Operation, before the repairing of the bridges across the Vistula, two pipelines were built in the areas of Fordon and Graudenze (Grudziadz) and over which over 5,500 tons of fuel were moved. As a result during the entire operation the front did not experience interruptions in fuel supply.

Regardless of the acute shortage of railroad rolling stock, the measures aimed at accelerating the delivery of fuel to the fronts made it possible for the Rear Services of the Center to steadily increase the dispatch of fuel from the refineries and transloading depots in accord with the growing demand of the

troops. Thus, while in 1943 (April-November) the average daily dispatch of fuel to the fronts was 969 tank cars, in 1944 (June-December) this had risen to 1,484 and by the end of the war exceeded 1,500 tank cars.(9)

In the offensive operations during the third period of the Great Patriotic War, due to the scope of the forthcoming operations and the difference in railroad gauges on the territories of the Soviet Union, Poland and East Prussia, it was not possible to transport fuel to the troops in Soviet tank cars. For this reason on the fronts particular attention was given to preparing and utilizing motor transport for carrying the fuel. For example, the First Belorussian Front by the start of the Vistula-Oder Operation had front fuel transport equipment for 1,500 tons and army equipment for 4,100 tons (a total of 0.35 of a fuel load). The First Ukrainian Front, in addition to the front, army and organic transport for carrying fuel, had in the front reserve some 190 tank trucks which could hold 450 tons. The lack of specialized tanker motor transport was partially compensated for by sided vehicles which were loaded with fuel barrels. The personnel of the rear services and troops was mobilized to collect the barrels. In the motor vehicle units and subunits, special vehicles were equipped for carrying fuel barrels.

The operations of 1944 showed the inadvisability of establishing diesel fuel supplies equaling 10-15 loads prior to the start of the offensive. The fronts, in moving forward rapidly, often left behind a significant portion of the unconsumed fuel supplies. This fuel was turned over, as a rule, to the military districts organized on the liberated territory. For this reason, in preparing the operations for the 1945 campaign in Europe, diesel fuel supplies were set in much smaller amounts (three or four fuel loads). The tank and mechanized troops virtually did not experience interruptions in fuel supply. But for this continuous delivery of diesel fuel was required both by rail by the Rear Services of the Center as well as by the motor transport of the fronts and armies, formations and units.

As the Soviet Army liberated territory where there were oil-producing and oil-refining enterprises, the fuel supply bodies, in showing initiative, boldness and tenacity, organized the production of oil products and even oil production here. Thus, the Fuel Service of the 18th Army (chief of the Fuel Supply Section, Lt Col S.I. Isayev) in the carrying out of the Carpathian-Dukla Operation by the Fourth Ukrainian Front, helped restore oil output on the liberated territory of the Western Ukraine and organized its refining at certain local oil refineries. From these enterprises the army received over 6,000 tons of oil products in August-December 1944. For the 3 last months the troops were supplied with the main types of fuel solely from local resources, without transporting them from the rear of the nation. This made it possible for the front's fuel supply section to increase the delivery of fuel to the other armies.

As a result of the successful offensive by the Second and Third Ukrainian Fronts, the possibility arose of using the Romanian oil industry for the needs of the war. Thus, in the second half of 1944, the situation with fuel resources on the southern wing of the Soviet-German Front noticeably improved. Fuel deliveries from Romania to the Soviet Union were carried out under the

corresponding agreements concluded between the USSR and Romania. For delivering fuel from Ploesti, Romania, to Reni, USSR, a sectional pipeline was laid some 225 km long and with a productivity of 40 cubic m an hour. This made it possible to accelerate the delivery of fuel to the troops of the operational army.(10)

In planning, preparing and conducting the Berlin Operation, the commanders and their staffs carefully considered and calculated the capabilities of the rear services to supply fuel to the troops. This is clearly seen from a telegram of the Military Council of the First Belorussian Front to Hq SHC on 24 January 1945:

"To the Supreme Commander-in-Chief, MSU, Comrade Stalin.

"The troops of the front in 10 days of a rapid offensive operation have reached the line of Bromberg--Poznan--Jarocin, having covered a distance of 350-400 km over the roads.... Motor vehicle gasoline has been the limiting factor: its consumption over the 10 days of the operation was 14,500 tons, an average of 1,450 tons a day, that is, 0.3 of a front fuel load. In recent days the daily consumption has increased to 2,500 tons, since the troops are 400 km away from the depots.... The front is taking decisive measures to reduce gasoline consumption and primarily to quickly put the railroads back into service. The front's military council feels that by the start of the third stage of the operation the front should have 3 loads of gasoline supplies or 14,600 tons.... As of 23 January 1945, the front had 11,178 tons of motor gasoline, or 2.4 front fuel loads, including the fuel in the vehicle tanks. Prior to 1 February, the front is to receive 12,512 tons and will have a total of 23,690 tons. Over the period from 23 January through 1 February, approximately 13,500 tons will be consumed, with 10,190 tons remaining on 1 February, that is, 2.1 fuel loads along with the fuel in the vehicle tanks. In essence, this means a slowed advance. In order to have 3 fuel loads by 1 February, the front must receive an additional 4,400 tons with delivery to the front's railhead by 1 February without fail. We have planned the subsequent consumption in conducting the third stage of the operation for 35,000 tons over a period of 20 days or an average daily consumption of 1,750 tons, or 0.36 of a fuel load. We request planning for the delivery of 35,000 tons: 20,000 tons for the first 10-day period and 15,000 tons for the second 10-day period. Then the front will reach Berlin with 3 fuel loads.

Zhikov, Telegin."(11)

Such careful figures on the highest level to establish the demand for fuel are convincing proof of the importance given to it in carrying out the strategic plan for the final defeat of Nazi Germany.

* * *

During the offensive operations of the third period of the Great Patriotic War, the volume of fuel delivered to the fronts rose significantly. Here rail transport played the main role in its supply. With the entry of the Soviet Army into the territory of neighboring states, the proportional amount of motor transport in fuel deliveries rose significantly. Later, with the

resizing of certain Polish railroads to the Soviet gauge, a larger portion of the fuel began to be delivered to the regulating stations on these roads and this noticeably facilitated the task of replenishing supplies on the fronts.

With a significant distance of the troops from the supply depots, the fronts in a matter of necessity received immediate aid from the Rear Services of the Center in the form of fuel delivered by motor transport and in critical moments also by air from the reserve of the chief of the Soviet Army Rear Services.

The operations of the third period of the Great Patriotic War were supplied with fuel virtually continuously. The personnel of all elements of the fuel service during them gained rich experience in providing fuel to large troop groupings. This has largely kept its importance today. This applies primarily to such important elements in preparing and supporting strategic operations as the early establishing of fuel supplies, the integrated use of all types of transport to deliver, organizing dependable and rapid transshipping of the fuel at connecting points of the lines of communications as well as the skillful use of local capability to obtain fuel and allocate its supplies. Of particular importance was the constant and clear coordination of the fuel service with the bodies delivering and transloading the fuel. Under present-day conditions, in line with the full motorizing of the Armed Forces and the significant increase in fuel consumption per day of combat and an operation, these elements in organizing fuel supply assume a crucial role.

FOOTNOTES

1. V.V. Nikitin, "Goryucheye--frontu. 1941-1945" [Fuel for the Front. 1941-1945], Moscow, Voenizdat, 1984, pp 44, 111.
2. Ibid., p 83.
3. "Tyl Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voynе 1941-1945 gg." [Rear Services of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, 1977, p 183.
4. Ibid., p 137.
5. V.V. Nikitin, op. cit., p 84.
6. Ibid., p 91.
7. N.A. Antipenko, "Na glavnom napravlenii" [On the Main Axis], Moscow, Nauka, 1967, p 153.
8. [Not in text]

9. V.V. Nikitin, op. cit., p 151.
10. "Tyl Sovetskikh Vooruzhennykh...", p 184.
11. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 233, inv. 213, file 74, sheet 23.

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WAYS TO IMPROVE PARTY POLITICAL WORK ON THE OFFENSIVE

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[Article, published under the heading "Party Political Work," by Maj Gen V.K. Luzherenko, candidate of economic sciences; the article was written from the experience of postwar exercises]

[Text] Under the conditions of the sharp exacerbation of the international situation brought about by the aggressive aspirations of the imperialist circles headed by the United States, the Communist Party and the Soviet government have been forced to initiate all necessary measures to strengthen the nation's defense might and increase the combat readiness of the Army and Navy. In the CPSU Program adopted by the 27th Party Congress, the Armed Forces were given the task of "showing high vigilance, and always being ready to thwart the intrigues of imperialism against the USSR and its allies."(1) In carrying out this task an important place is held by the constant improvement in troop field skills. In the course of maneuvers and multi-day exercises the troops gain the ability to conduct active and decisive combat operations against a strong, technically equipped enemy under the conditions of its employment of weapons of mass destruction.

Along with other factors, party political work holds an important place in improving tactical training. Over the postwar years, very rich experience has been gained in its organization and conduct under the most diverse conditions of exercises and maneuvers, primarily on the offensive which is the main type of military actions of the Soviet Army.

At the major exercises of this period, particularly those such as Dnepr [Dnieper], Karpaty [Carpathians], Dvina, Berezina, Nemан, Zapad-81 [West-81], Shchit-84 [Shield-84] and others, the forms and methods of party political work were steadily improved in mobilizing the personnel for active, enterprising and rapid actions during offensive combat and views were elaborated on the ways for increasing the effectiveness of this work and strengthening the influence on the men.

The acquired experience shows that the effectiveness of party political work on the offensive to a significant degree is determined by how much this work

corresponds to the battle tasks and how it considers the training level of the command and political personnel, the soldiers and NCOs.

The bases of such congruity are established in the planning of the party political work for the offensive combat. During the postwar years, the methods of planning this work have been constantly improved. Up to the mid-1960s, the political bodies and the deputy commanders for political affairs ordinarily drew up several plans: for the period of preparing for combat, during the combat training actions both with the employment of conventional weapons and in the event the enemy uses weapons of mass destruction, carrying out such tasks as crossing a water obstacle, repelling a counterattack and so forth.

Practice has shown that such an approach to planning was not effective. In subsequent years, a single plan was drawn up for party political work for the period of preparing and conducting the offensive combat training. This plan was designed for any method of actions both with the employment of solely conventional weapons as well as in the event of the enemy's employment of weapons of mass destruction. Here possible variations in the development of the situation were provided.

The quality of the planning of party political work and its effectiveness depend largely upon a profound and thorough elucidation by the chief of the political body (the deputy commander for political affairs) of the received battle task, the instructions of the senior political body and the plan adopted by the commander as well as the political worker's knowledge of the essence of modern combined-arms offensive combat and his understanding of the moral-political state of the personnel and the strong and weak points of the enemy.

An important means for increasing the effectiveness of party political work is the placement of political workers in the units, subunits and elements of the battle formation. This was confirmed, in particular, by the experience gained in the demonstration tactical exercise held on the eve of the 40th anniversary of Great October in the Kiev Military District by a tank unit and involving the underwater crossing of the Dnieper by tanks.

This was the first time that such an exercise was conducted in our Armed Forces. Considering its importance, the newness of the tasks carried out in it and requiring exceptionally high moral-psychological stress on the personnel and honed combat skill, the district political directorate focused its efforts on providing help to the political workers in mobilizing the personnel to successfully conduct the exercise.

During the period of preparing for the exercise and in the course of it, working in the unit were the district military council member, Lt Gen N.M. Aleksandrov, the chief of the political directorate, Maj Gen A.G. Gromov and many officers from the political body. They were constantly in the battalions and companies and together with the personnel they worked out the procedures for waterproofing the tanks, the procedure of crew actions in the moving of the tank across the river bottom, organizing rescue and salvage work and so forth. A majority of the officers from the political directorate as

part of the tank crews crossed the river bottom two or three times. This helped them understand the moral and psychological state of the tank troops, to work out the most effective forms of party political work and provide specific aid to the commanders and political workers of the subunits.

As a result of the effective and constant party political work, by the start of the exercise, all the personnel had been mobilized for unstinting action, they burned with the desire to carry out the responsible tasks in an exemplary manner and did this successfully. The unit produced masters of tank driving under difficult conditions. MSgts G. Istomin and I. Marinets, Sgts G. Zyulin and N. Karpov crossed 70-80 times in the tanks under water, while the tank commander Jr Sgt S. Vakulyuk and the driver Jr Sgt F. Filippov crossed the water obstacle 92 times.(2)

The well conceived placement of the political directorate officers made it possible for the political body not only to increase the effectiveness of the party political work in the exercise, but also to completely generalize its experience. This contributed largely to the skillful organizing of the ideological and party organizational activities in the exercises involving the underwater crossing of rivers in other districts.

In the course of the Great Patriotic War and during the exercises conducted in the postwar years, a uniform approach has been elaborated to allocating the political workers: the most experienced and skilled of them are sent to those units and subunits which are to carry out the most crucial tasks (participate in destroying the primary enemy targets, fight on the axis of the main thrust or away from the main forces, repel enemy counterattacks and so forth). Moreover, as the experience of the limited contingent of Soviet troops in Afghanistan has showed, frequently the need arises for sending well trained political officers to those subunits where the political workers do not have the required skills in organizing party political work in a combat situation.

In modern offensive combat with its great pace and wide spatial scope, particular importance is assumed by the ability of each commander and political worker independently, without waiting for instructions, to organize party political work in accord with the developing situation. For precisely this reason one of the ways for improving party political work on the offensive is the well thought out and careful instructing of the commanders and political workers, the party and Komsomol aktiv and familiarizing them with the forms and methods of party political work under combat conditions. For example, in the Dvina Exercises, the instruction session included an explanation of the situation and the battle task for the unit, a plan for political work on the offensive, the assigning of specific tasks and recommendations concerning the ways for influencing the personnel in combat.

For successfully conducting party political work on the offensive it is very important to maintain a strong tie between the divisional political section and staff and closely coordinate their efforts. This is achieved primarily by the personal contact between the officers of the staff and political section, and by their providing of reciprocal information on questions requiring the organization of joint measures aimed at ensuring high combat readiness of the

units and subunits, strengthening the political and moral state of the personnel and their all-round preparation for combat.

In particular, this was how party political work was organized on the offensive in the course of the Zapad-81 Exercises. The officers from the divisional political section and staff achieved high moral-political and psychological readiness of the personnel to carry out the set tasks. They gave particular attention to elucidating the questions of further strengthening the nation's defense capability and the combat might of the Armed Forces under the conditions of a complex military-political situation. Around one-half of all the agitation and propaganda measures was devoted to this. The providing of political and combat information for the men during the exercise was carried out virtually continuously.(3)

The exercises of the postwar period have shown persuasively that one of the most effective ways for mobilizing the personnel to successfully carry out the battle tasks is a further improvement in the organization of their political training under combat conditions and this should be carried out considering the military-political situation and the battle tasks. For officers in the process of this, lectures and reports are given, political reviews and information sessions are conducted and if conditions permit, colloquiums and seminars. For the warrant officers [praporshchik], NCOs and soldiers, political hours, political conversations and political information sessions (for the subunits) are organized.

A differentiated approach to the work with the personnel and primarily with the officers who are the organizers of combat helps to ensure high effectiveness of party political work on the offensive. Particular attention is paid to those who have recently completed a school, who have been called up from the reserves as well as those who have not held a given position long enough or were just appointed to it.

The forms of work with the officers are determined chiefly by the length of the preparatory period. For example, in an exercise in one of the regiments of the groups of Soviet troops in Germany, for the officers lectures were given on the subjects "The Organization and Armed Forces of NATO," "Enemy High-Precision Weapons and Methods to Combat Them," and "Actions of a Motorized Rifle Regiment on the Offensive in the Division's First Echelon." Speaking to them were participants of combat in Afghanistan. An instructional exercise on organizing party political work in combat was held for commanders of companies where there were no deputies for political affairs.

If the lack of time or the dispersion of the units and subunits did not permit the conducting of similar measures, individual work becomes the basic form for the officers. This is combined with brief instruction sessions for individual groups of officers. In a word, any opportunity is employed for the ideological conditioning of the officers and for enriching their knowledge in tactics and the procedure of actions in combat.

Modern offensive combat requires from the personnel the skillful mastery of weapons and combat equipment. An important means for improving party political work in the course of the postwar exercises has been the more

careful consideration of the particular features of the tasks to be carried out by the men as well as the conditions under which they are to act.

Thus, in the Zapad-81 Exercises, certain young soldiers, in remaining for a long time in their infantry combat vehicles, experienced so-called psychological discomfort. Individual tank crews did not keep their place in the line of the battle formation. Thoughtful party political work, in being aimed at developing in the personnel a moral-psychological strength for actions under unusual conditions, helped to overcome this phenomenon.(4)

The dissemination of advanced experience holds an important place in the work of improving the combat skill of the men. Here the most effective method is the actual demonstrating of the procedure and rules for handling equipment under conditions close to those under which combat will occur. Such a method in being widely practiced during the years of the Great Patriotic War has been developed in the exercises of recent years. In particular, during the Karpaty Exercises, upon the initiative of the party committee of one of the tank regiments from the Carpathian Military District they organized a demonstration for the drivers for the procedure and rules of driving a tank under mountain conditions. The experienced specialist, WO N. Charnik, told about the methods for overcoming difficult areas of mountain routes and demonstrated several times how this should be done. Later, the drivers worked out the difficult procedures of driving independently. Along with other measures this helped to successfully carry out a march under mountain conditions.

The studying of various memoranda and leaflets issued by the political bodies helps to introduce advanced experience. At one of the exercises, for example, the Political Directorate of the Group of Soviet Troops in Germany published leaflets devoted to combating the tanks and armored vehicles of the probable enemy. These told of the vulnerable places in these armored objects and contained advice on employing weapons to destroy them. In a number of the military districts they have issued instructions on defense against high-precision weapons and the combating of these.

Advanced experience is widely treated by the military press in the course of major exercises. In the Dvina Exercises, in particular, the editors of the district newspapers KRASNYY VOIN, NA STRAZHE RODINY, VO SLAVU RODINY, ZA RODINU and KRASNOYE ZNAMYA as well as the soldier papers did a good job. The tone of all the military press was set by KRASNAYA ZVEZDA. The newspapers published reports, correspondence, articles, procedural materials as well as stories generalizing new tactical procedures and the methods of employing equipment and weapons under various conditions. All these materials were actively employed in party political work with the men and helped increase its effectiveness.(5)

The exercises and maneuvers of the postwar years show that one of the important means for improving party political work in offensive training combat is to increase the role of the party organizations in the units and subunits in mobilizing the men to successfully carry out the set tasks. Significant experience has been gained in having the communists set a personal example. This is achieved primarily by specific assignments for the period of preparing and conducting combat and the nature of these is set by the

situation, the place of the communist in carrying out the set tasks as well as by the capabilities of carrying out various assignments. Thus, in providing aid to an Afghan subunit in defeating a bandit ambush, the communists in one of the companies were instructed to explain the set mission to the personnel, by a personal example and skillful actions to inspire the men, to instill confidence in victory in them and to provide the greatest possible help and support to the young soldiers. One of the communists was ordered to erect a flag on the captured dashmar command post.

The party organizations see to it that each communist takes an active part in ideological indoctrination, in measures aimed at improving the readiness of the personnel for combat and mobilizing the men for unstinting and enterprising actions under any conditions. For example, during the Neman Exercises the communists from one of the regiments of the Baltic Military District took an active part in providing political and combat information for the personnel, in the work of the open Komsomol meetings and in holding political hours on the subject "V.I. Lenin and the CPSU on the Aggressive Essence of Imperialism. Tasks of the Personnel to Further Increase Vigilance." They explained to the men the coming tasks and the requirements of the regulations, they acquainted them with the content of various instructions and so forth.(6)

Correctly organized activities of the staff party organizations helps largely to increase the effectiveness of party political work on the offensive. The party organizations assign political information reporters from their personnel and plan their work and see to it that the staff communists take an active part in the political indoctrination measures of the units and subunits where they are sent to carry out official assignments, as well as in providing political and combat information for the men.

With the start of the offensive, the efforts of the commanders and the political workers are directly primarily at ensuring bold, decisive and enterprising actions to promptly carry out the combat training tasks. The effectiveness of their work is achieved by the constant maintaining and increasing of the offensive drive of the men, by constantly informing them of the situation developing on the battlefield, by the skillful choice of the most effective forms of political influence on the personnel as well as by the continuity of this influence. The experience gained by the men carrying out their international duty in Afghanistan merits attention. Here they see to it that in every armored vehicle, crew or team there is a communist or Komsomol activist who is possible has been previously involved in fighting. The company and battalion political workers instruct them ahead of time, they share their experience with them, they ascertain which of the men needs support in combat and provide advice on how to better give help.

Similar experience was widely employed in the Shchit-84 Exercises in the course of which the activists working directly in the subunits helped greatly in ensuring uninterrupted party political work. They set the example for the men in "combat," they explained the combat training tasks to them and carried out agitation work.

Regular information for the personnel about the successes of the unit, the formation or combat feats of comrades helps in achieving high effectiveness of party political work aimed at maintaining and boosting the offensive drive of the men. The experience of the Great Patriotic War has shown that information about victories achieved over the enemy, the propagandizing of the successful actions of outstanding men and their prompt presentation for decorations and commendations have an inspiring influence on increasing the morale of the men.

In working to increase the offensive drive of the men, the commanders, the political workers and the party organizations indoctrinate them in hate for the imperialist aggressors. Meetings conducted in the course of the Dnepr, Karpaty, Neman, Dvina, Zapad-81 and other exercises by fraternal graves and monuments to the victims of fascism and meetings with the veterans of the Great Patriotic War and former partisans where they described the crimes and atrocities of the Nazis on the occupied territories of the Ukraine, Belorussia and the Baltic mobilized the men to exemplary fulfillment of combat training tasks.

At present, the opportunities for intensifying this work have been significantly widened. The political workers and the agitation-propaganda aktiv possess diverse propaganda equipment. In using the examples of the aggressive actions of the imperialists, of their suppression of the revolutionary and national-liberation movements as well as retribution against progressive leaders, they persuasively unmask the antipopular face of imperialism and our probable enemies.

It is hard to increase the effectiveness of party political work without the greatest possible intensification in the activities of the Komsomol organizations in the units and subunits. Increasing the party stratum in the Komsomol, careful selection, placement and instructing of the Komsomol aktiv, professional help for them by the commanders and political workers in organizing work with the youth--all of this makes it possible to ensure that the Komsomol members set an example and this ultimately helps in successfully carrying out the tasks of the offensive.

Thus, the most important conditions for increasing the effectiveness of party political work on an offensive are its precise conformity to the tasks and nature of the specific training combat, the active involvement of all the commanders, political workers, communists and the Komsomol aktiv in it, and focusing the efforts of organizational and ideological indoctrinational work on maintaining and boosting high offensive zeal in the personnel, that is, an aware desire to carry out the set task at whatever the cost.

The carrying out of the complex and responsible tasks posed by the 27th CPSU Congress for the Soviet Armed Forces requires a further improvement in party political work in all areas of life and activities of the troops, including in exercises, in a situation as close as possible to actual combat.

FOOTNOTES

1. "Materialy XXVII sъезда КПСС" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 161.

2. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 131, inv. 770581, file 13, sheets 154-155.
3. Zapad-81 [West-81], Moscow, Voyenizdat, 1982, p 12.
4. Ibid., p 13.
5. "Dvina," Moscow, Voyenizdat, 1970, p 23.
6. "Neman," Vilnius, Mintis, 1980, pp 207-208.

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MILITARY HISTORY EDUCATION AT MILITARY SCHOOLS DISCUSSED

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 68-72

[Article, published under the heading "Military History Work in the Troops and VUZes," by Col N.T. Zavgorodniy, candidate of historical sciences, docent: "On the Question of Training Students and Officer Candidates"]

[Text] The editorial published in VOYENNO-ISTORICHESKIY ZHURNAL, No 1, 1987, entitled "Military History Work--On a Level of Modern Requirements" evoked lively interest among the military history instructors. It raised timely questions of improving military history training for the students of military academies and schools. We would like to voice our considerations on this question.

Military history knowledge plays an enormous role in the training of military personnel. MSU B.M. Shaposhnikov has written: "The academy instilled in me a love for military history and taught me to draw conclusions from it for the future. I have generally always liked history as it has been a bright marker on my path. In the future, we must continue to study this repository of wisdom."(1) He did this all his active life with great affection and tenacity.

Under present-day conditions, the importance of military history knowledge in the question of studying and indoctrinating officer candidates and students of military schools has been growing, since only in passing on combat experience to the students and in acquainting them with the laws, patterns and principles in the development of military art and the lessons of military history is it possible, in particular, to more successfully carry out the task posed for the higher school by the 27th CPSU Congress, that is, to turn out specialists who "combine high professional training, ideological-political maturity and the skills of organizational and managerial activities."(2) A study of the very rich military history experience, particularly from the period of the Great Patriotic War and the postwar years, helps to widen the military-political viewpoint of the command and political personnel and aids them in creatively approaching the training and indoctrination of subordinates and in preventing errors. Military history training has a great role to play in indoctrinating in the military personnel political vigilance, feelings of hate for the enemies of socialism and unswerving will for victory over them. The General

Secretary of the CPSU Central Committee, M.S. Gorbachev, has emphasized that our victory in the Great Patriotic War "is not a matter of the past. This is a living victory turned to the present and to the future."(3)

Unfortunately, it must be admitted that the level of military history knowledge among officers entering academies does not always correspond to the demands of the times. At times, they do not have sound knowledge in military history studied in military schools. Certain officers before admission to the academy worked little on widening their military history viewpoint.

An analysis of the military history training for students in the first years of the Air Forces Academy imeni Yu.A. Gagarin over the last 10 years has shown that a portion of them does not have a sufficiently profound knowledge of the history of wars, the history of the rise and development of the air forces and other questions, and they read little military history and memoir literature. This tells negatively upon the students' deepening of their military history knowledge during the period of studies in the academy.

Flaws in the curriculum of the course of the history of military art have also been felt. In particular, this does not pay proper attention to training in the work methods of commanders (superiors) in conducting military history work in the troops. The interest of the students in studying the history of military art has been reduced by insufficient practical focus to the course and its link to the programs of the operational-tactical and social disciplines.

The problem of further increasing the level of military history knowledge among officers requires the greatest possible improvement in the process of the recruitment, training and retraining of the personnel of military historians. At present, only the Military Academy imeni M.V. Frunze has a military history department. In the other academies, specialists in the military history area are trained by graduate work. However, over the last 15 years of those finishing graduate studies at the Air Forces Academy imeni Yu.A. Gagarin only two were sent to higher military aviation schools.

We feel that help in solving the problem of planned and skilled training for instructors of the history of military art for the military academies could be provided by the Military Academy of the General Staff imeni K.Ye. Voroshilov where previously there was a military history department. Obviously, the time has come to open under the academies of the Armed Services military history departments which would turn out instructors of military history for the higher military schools as well as specialist historians for the staffs. Undoubtedly it would be beneficial to establish courses for the advanced training of military historians of military academies under the Military History Institute of the USSR Ministry of Defense and similar courses for the military schools under the military academies of the Armed Services.

In drawing on the experience of the social sciences chairs of the Moscow military academies and schools, it would be advisable to periodically hold seminars for military historians where they could organize the giving of a series of lectures on the history of military art, historiography, bibliography, pedagogics and psychology of the higher military school and

exchange experience in carrying out the decisions of the 27th CPSU Congress and the January (1987) Plenum of the Party Central Committee.

We all know what an important role is played by educational methods in improving the professional skill of the instructors and intensifying the training exercises on military history disciplines. In this area the chairs of the history of military art at the military academies have done a good deal. They have increased the level of conducting the procedural assemblies for the faculty and sessions of the chairs, better teaching materials, visual aids, special methods and educational aids are being developed, and special classrooms established. Instructor-procedural and open exercises are being held, new procedural methods are being tested out, and other interesting and useful measures organized. The chairs of the history of military art, particularly at such senior military schools as the Military Academy of the General Staff imeni K.Ye. Voroshilov, the Military Academy imeni M.V. Frunze, the Military Academy of the Armored Troops imeni R.Ya. Malinovskiy and the Military-Political Academy imeni V.I. Lenin, have gained rich experience in raising the level of the educational skills of the faculty. However, as yet this is not being propagandized sufficiently.

It would be desirable by collective efforts of the military historians to create the work "Metodika prepodavaniya voyenno-istoricheskikh distsiplin" [Procedures in Teaching Military History Disciplines]. It would be advisable to also devote a dissertation to this problem. The journals of the Armed Services could make a more marked contribution to improving the educational skills of the faculty by systematically publishing in their pages materials under the heading "Military History Experience Teaches." This is particularly important due to the fact that teaching in military academies and schools now involves many officers who do not have special training and pedagogical experience and the presence of such publications and articles will help in their more rapid development as well as in improving the educational level of experienced instructors.

A more profound and faster dissemination of educational experience would be aided by including instructors from the chairs of the history of military art in the commissions of the Main Inspectorate of the Ministry of Defense, the Main Directorate of VUZes and others involved in inspecting the military academies and schools.

An important role could be played by clarifying the names of the military history disciplines in the academies and schools, their goals as well as a more reasonable distribution of study time according to the sections of the curricula.

An analysis of the standard curriculum for a course of military history for the military schools and institutes indicates that these military schools study the history of wars and primarily World War II, as well as the history of the organizational development of the armed forces. We feel that the military schools and institutes should study the history of wars as the basis of military history knowledge.

In the process of studying the history of wars, the officer candidates are obliged to profoundly assimilate their socioeconomic essence and reasons of occurrence, the plans of the belligerents, the course of military operations, understand the reasons for victories and defeats and realize how major wars have influenced the development of tactics; they must learn to creatively employ the lessons and experience of the wars in the defense of the socialist fatherland as well as the local wars of the postwar period for studying tactical disciplines in the school, in the training and indoctrinal work with the personnel and for unmasking bourgeois falsifiers; they must become familiar with the history of the rise and development of operational art.

This will be greatly aided by the recently introduced new standard curriculum for the course of military history for military schools and military institutes.

The course of the history of military art in the military academies of the Armed Services and branches of troops must, without duplicating the curricula of the history of wars, significantly widen the military history viewpoint of the students. Those who study this should profoundly understand the questions in the development of the operational-tactical disciplines and creatively carry out the tasks confronting the troops. They must know the history of the rise and development of the types, methods and forms of armed combat, the particular features of the influence of the most important factors on this process, the laws, patterns and principles in the development of military art as well as the history of the development of tactics and operational art; they must be able to analyze the ways the most important factors influence the development of operational art and tactics; they must creatively employ rich combat experience in studying operational-tactical disciplines in the academy, and in training and indoctrinating subordinates; they must have an idea about the rise and development of military strategy. Here one of the most important tasks for the faculty is to develop in the students high moral-political, combat and professional qualities drawing upon the examples of the heroic feats of the Soviet soldiers, the active and decisive operations of the units, formations and field forces as well as a creative approach by the commanders, staffs and political bodies to troop command.

Over the last 40 some years, revolutionary changes have occurred in the development of military art. For this reason the course curriculum should pay more attention to studying the history of operational art and tactics in the postwar period. We feel that significantly more study time should be devoted to this than is presently the case. Then the students will be able to more profoundly understand the pattern and continuity of the historical development of military affairs as well as the dialectical succession of military history experience. Chronologically the curriculum of the history of military art will be brought closer to the curricula for the operational-technical disciplines of the military academies.

The times urgently demand the incorporation into the standard curriculum for the history of military art more generalizing subjects which bring out the laws, patterns and principles for the development of military art and which show what the historical experience of its development teaches as well as on the methods of organizing military history work in the troops.

A restructuring of the teaching of the history of military art would do well in further raising the level of military history knowledge of the military personnel and in making fuller utilization of the intellectual potential of the officers. We see the main ways for resolving this problem by improving the curricula and subject plans by the collectives of the chairs of military history, by reallocating time to the various types of exercises, publishing textbooks which encourage thoughtful independent work by the officers not only during studies in the academy but also during the period of service in the troops.

With the publishing by Voyenizdat in 1984 of the textbook "Istoriya voyennogo iskusstva" [History of Military Art] and teaching aids and lecture courses in the academies of the Armed Services and branches of troops, a good opportunity has arisen for increasing the proportional amount of practical exercises with the students in the subject plans. Of course, we must not play down the role of lectures. But still, as is shown by the experience of the chair of the history of military art at the Air Forces Academy imeni Yu.A. Gagarin in 1981-1986, the knowledge gained independently and reinforced under the leadership of the instructor in group exercises and seminars proved to be sounder. For this reason, in the subject plan for the 1986-1987 academic year, practical exercises (group, seminars and written exam work) have received almost double the number of hours than in the plan for the 1980-1981 year, that is, 60 percent in comparison with 32. This encourages the intellectual activities of the students, competitiveness in the independent study of the subject, and encourages a critical assessment of the obtained results. Reserves for intensifying the training and indoctrinal process lie in a well-conceived system of independent work for the students. Such an approach helps to improve the professional and military history training of the students. The faculty cannot give the students the same military history information which military history science will possess in the 21st Century, but, having taught them to study, it will prepare them for the independent acquisition of knowledge in the future.

In our view, a higher level of military history knowledge among the students would be aided by introducing in the academies a standard form of reporting on the studied course of history of military art, that is, an examination. At present, some academies employ a quiz, others a differentiated quiz while still others employ an examination.

In taking a quiz the students are not granted time to prepare independently for it. And this prevents them from systematizing the knowledge gained in the course of studying the course which covers a great deal of information.

A further rise in the level of the students' military history knowledge is inseparably linked not only with the search for ways to improve the training of military historians and seeking out more effective methods but also to improving the physical support for the chairs of the history of military art. The documents of the 27th CPSU Congress pointed to the need of improving the physical plant of the higher school.(4)

In line with the adjustment of the subject plans and curricula for the course on the history of military art, painstaking work must be carried out to establish or modernize the specialized classrooms and equip them with modern facilities, including computers. There must be better design, an increase in the number and the more active introduction of teaching equipment into the training and indoctrinal process. It is important to more widely employ television, movies as well as tape recorders, film strips and slides. Obviously, the time has come to make film shorts which demonstrate the work methods of the commanders, the staffs and political bodies in the course of preparing and conducting combat and which demonstrate what influence weapons have on the development of military art and so forth.

In their independent work of studying the history of military art the students will be greatly helped by the visual aids published by the academies, including albums of diagrams, bibliographic references and historiographic reviews of the most important military history and memoir literature.

In recent years, many chairs have begun to noticeably influence the enlarging of the military history resources of the academy libraries. However, it must be said that the organizing of the interlibrary exchange of teaching military history literature published in the academies must be improved.

A thorough study of the course on the history of military art in the military academies of the Armed Services and branches of troops is an important condition for establishing a sound base for further deepening the military history knowledge of the officer personnel studying in the Military Academy of the General Staff imeni K.Ye. Voroshilov. As a result of studying the history of wars and military art in this institution of learning, the students should know the history of the rise and development of operational art and military strategy and the influence of the most important factors on this process, the methods of work of the commanders, staffs and political bodies of the field forces in the course of preparing and conducting military operations, the laws, patterns and principles in the development of military art; they should be able to analyze the process of the effect of various factors on the development of operational art and military strategy; they should be able to creatively employ combat experience in studying military and social disciplines in the academy, in directing the training and indoctrination of subordinates as well as in military history and scientific work in the troops.

It would be very beneficial to pay more attention to increasing the military history knowledge among instructors of operational-tactical and social disciplines in the military academies and schools as well as the officers in the units and formations.

For instructors in the system of commander training, it would be advisable to make it a practice to give lectures and hold seminars on the timely problems of the history of military art and military historiography as well as show military history training films. The experience of preparing for the 40th anniversary of the victory in the Great Patriotic War showed that well prepared military conferences also play an important role in training and indoctrinating the faculty. A solution to this important problem would be aided by the publishing on a series of books on outstanding military leaders

and military historians, theoreticians and sets of their photographs as well as a fundamental work "Istoriya voyn i voyennogo iskusstva" [The History of Wars and Military Art] which would deal with the history of military strategy, operational art and tactics from the moment of their rise until the present. The value of this work, we feel, would be increased by appending a list of the most important works by Soviet and foreign authors devoted to military art.

Improving the military history training of officer candidates and students is an imperative of the times. The more careful recruitment of military historians, the improving of the system for their training and advanced training, the establishing of a better physical plant for the chairs of the history of military art, a new approach to studying military history disciplines in military institutions of learning and providing a high level of military history knowledge among the instructors of the operational-tactical and social disciplines at the military academies and schools--all of this will help to successfully carry out the tasks posed for the higher school by the 27th CPSU Congress and to increase the combat readiness of the units and formations.

FOOTNOTES

1. B.M. Shaposhnikov, "Vospominaniya. Voyenno-nauchnyye trudy" [Memoirs. Military Scientific Works], Moscow, Voyenizdat, 2d Supplemented Edition, 1982, p 182.
2. "Materialy XXVII sъezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 167.
3. M.S. Gorbachev, "Bessmertnyy podvig sovetskogo naroda" [The Immortal Feat of the Soviet People], Moscow, Politizdat, 1985, p 3.
4. See: "Materialy XXVII sъezda...", p 315.

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U.S. MILITARY-INDUSTRIAL COMPLEX

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 73-80

[Article, published under the heading "From the History of the Nuclear Madness of Imperialism," by Col (Res) S.D. Petrov, candidate of military sciences]

[Text] In pointing to the unprecedented growth of military expenditures in the imperialist countries and in particular in the United States, the 27th CPSU Congress commented that the military-industrial machine is the locomotive of militarism. "The monopolies producing weapons, the generals, the state bureaucracy, the ideological apparatus and militarized science," the Party Program states, "have merged into the military-industrial complex and have become the most fervent proponents and organizers of a policy of adventurism and aggression. An evil alliance of merchants of death and the imperialist state power is a support for the extreme reaction and a constant and growing source of military danger...."(1)

The concept of the "military-industrial complex" was used for the first time by the U.S. President D. Eisenhower in his farewell speech on 17 January 1961. "The uniting of the enormous military organization and the extensive military industry," he said then, "is a new phenomenon in the American experience. Its economic, political and even spiritual influence is felt in each city, in the government of each state, and in any office of the federal government. In realizing the urgent need for such development, we should not remain unaware of its serious consequences. In the governmental bodies we must be more alert against the unjustified influence which, intentionally or not, the military-industrial complex has gained."(2)

The U.S. military-industrial complex is the most essential expression of the aggressive nature of modern American imperialism and a most important component in the state-monopolistic capitalism of the United States. In its structure one can clearly see three main parts: the management of the military-industrial corporations, the top level of the reactionary military and the portion of the state apparatus linked to these. Also a part of the MIC [military-industrial complex] is the entire network of secret and semi-secret government organizations including the NSC (National Security Council), the CIA, FBI and the special U.S. congressional committees which form an "invisible government" beyond the reach of American society and the activities

of which lie beyond the control and supervision of the society. The U.S. MIC is presently a powerful economic and political force.

The rise of the MIC is linked to the process pointed out even by V.I. Lenin of the development of state monopolistic capitalism, to the growing arms race and the growth of militarism.

In the United States, military-state monopolistic capitalism described by Lenin as "military forced labor for the workers and a military guard for the profits of the capitalists,"(3) underwent extensive development during the years of World War I and subsequent years. Military-industrial alliances arose and began gaining strength. Their activities attracted such serious attention from Congress that it adopted an unprecedented decision to conduct a special investigation of the defense industry.

The congressional committee stated: "In...America the world war created 22,000 new millionaires...."(4) It was pointed out that the "unhealthy alliance" of the suppliers of weapons and the military means "the coming to political power of groups which, in hiding behind talks about patriotism, are pursuing selfish aims."(5)

Very curious was the committee's opinion that such an alliance represents an "inseparable part of militarism," and is an "economic evil of wartime" and that in a period of peace its development "must be stopped at any price." It was recommended, in particular, that the private defense industry be nationalized.(6) But this generally humane proposal was pigeon-holed.

World War II was a powerful accelerator for the processes of militarization in the United States. The system of military-state monopolistic capitalism not only enriched the long extant groupings of financial capital but also fostered a new galaxy of magnates. The previously known manufacturers, gunpowder, revolvers and rifles such as Dupont, Colt, Winchester and others moved into the background, giving way to new powerful military-industrial concerns. In comparison with the present-day weapons empires the "merchants of death" of the 19th Century appear as innocent youths.

In the postwar period, in endeavoring to halt the further course of history and suppress the revolutionary and national-liberation movement, the United States assumed the functions of the world's policemen and became a center of international reaction and modern militarism. The military-industrial complex developed under these conditions.

U.S. defense production presently involves a very wide range of firms. Suffice it to say that there are 25,000 companies and institutions as primary contractors of the military agencies. Many firms turn over a portion of the orders to subcontractors the number of which exceeds 100,000. These 125,000 contractors and subcontractors operate in many-score economic sectors in all states of the nation. Each year the Pentagon agencies sign around 15 million contracts with their subcontractors.

In our literature, the Pentagon's major contractors, depending upon the volume of military orders, are usually divided into three groups.(7) In the first,

the largest, are General Dynamics and around another 30 companies; in the second there are approximately 40 firms including General Electric, Chrysler and others; in the third some 15 firms. With the aid of such a division, the question of the composition and structure of the U.S. MIC can be more objectively resolved.

However, it is scarcely possible with maximum accuracy to draw a demarcation line between the companies which are part of the MIC and those which border it. Facts show that over an extended time in the Olympus of the defense business there have been changes brought about by a sharp competitive struggle and military requirements. For example, during the period of the American aggression in Korea, the largest defense contractor was the General Motors Corporation which produced tanks and other types of conventional weapons. At the start of the 1980s, it had moved to 27th place. The main aim of the MIC in the current decade is to strengthen and widen the nuclear "triad": the intercontinental ballistic missiles, the nuclear submarine fleet and strategic aviation.

Currently there are around 150 weapons systems in various stages of development, production and modernization in the United States, including 19 aircraft and 17 strategic missiles. At the same time, space attack weapons are being developed. The implementation of these militaristic programs involves many industrial concerns, universities, laboratories, military-strategic centers but nevertheless the chief positions in this area are held by a rather stable group of corporations.

Who are they, the modern U.S. weapons magnates?

One of the presently most flourishing corporations is General Dynamics which has existed under this name (headquarters in St. Louis, Missouri) since 1952. In terms of the value of defense orders (\$7.74 billion according the 1985 results) it shares recently 1st-2d place with the McDonnell-Douglas concern. It basically produces only defense products, including the Trident submarines, the modern F-16 fighters, the M-1 Abrams tanks and so forth. The civilian affiliates of the company were recently dissolved due to inprofitability. In August 1986, at the yard in Groton there was a ceremony of commissioning the nuclear submarine "Nevada" with 24 nuclear missiles on board. This was the 8th submarine of this class in service in the U.S. Navy and the 9th was launched in December.

The main enterprises of the corporation are located in San Diego and Pomona, California, and in Fort Worth, Texas. Representatives of the capitalistic dynasty, the Crown father and son, dominate the board of directors.

In 1985, because of scandals caused by the overcharging of prices for products and other financial machinations, various congressional bodies and the Department of Justice began ten investigations at once against the company. However, this "investigation" was merely a diversion and soon everything had gone back to "business as normal."(8)

McDonnell-Douglas is the 2d leading contractor of the Pentagon. During the period of 1975-1977 and in 1981, the company led in the struggle even with

General Dynamics. The number of orders from the defense agencies continues to increase even now. In 1985, they were \$8.86 billion. This basically involves the production of the F-15 fighter bombers for the Air Force, the F-18 fighters for the Navy and the F/A-18 for both the armed services, modifications of the DC-10 aircraft for the Rapid Deployment Forces (RDF) and the A-8B vertical take-off aircraft for the Marine Corps. The firm also produces the AH-64A helicopter gunships, the Tomahawk cruise missiles, the Harpoon antishipping missiles, the Dracon antitank missiles, as well as the Phantom and Skyhawk fighters. The concern has been assigned work also in developing the ASAT antisatellite system.

The Lockheed Company (headquarters in San Francisco), like General Dynamics, has become a military-industrial concern specializing in missile production. Its defense orders for 1980-1983 rose to \$4 billion. It produces the TR-1 reconnaissance aircraft (an advanced version of the notorious U-2), the P-3 Orion ASW aircraft for the Navy, the CX and C-5 transport aircraft for the RDF, the Trident, Polaris and Poseidon missiles, neutron weapons and military amphibious vessels.

The Lockheed firm has received orders to develop an antimissile interceptor designed to hit targets beyond the atmosphere. This type of weapon is becoming an important component in the wide-scale antimissile defense system with space-based elements. The influence of the Rockefellers is strong in the company.

The major aerospace corporation Boeing (headquarters in Seattle) in 1977-1979 kept for itself defense orders totaling around \$1.5 billion. It holds a rather high place among the Pentagon contractors (in 1983, the volume of its defense orders was \$4.4 billion). The largest projects involve the production of the E-3 reconnaissance aircraft armed with the AWACS system, the B-52 strategic bomber and its modifications, and the KC-135 tanker aircraft. The firm builds the Minuteman intercontinental ballistic missiles (ICBM), air-to-ground missiles, it is involved in the programs for producing the MX missiles and the Roland missile units and is extensively developing space and antisatellite weapons. The corporation is controlled by the New York Rockefeller and Morgan banks.

Hughes Aircraft is specialized in producing high-precision electronic equipment for the missile industry. The corporation has widened the volume of defense orders from \$1 billion in 1977 to \$3.2 billion in 1983. The most important involve the Phoenix, TOW and Roland missiles, the TRAM, FLIR electronic systems, and the production of reconnaissance equipment. Moreover, the firm has been one of the initiators in the United States in developing laser and space weapons. It receives particularly high-secret governmental orders. It is considered a favorite of the CIA.

One other corporation which is basically employed in missile building is Martin-Marietta. It is the head contractor in the construction of the MX ICBM and the Pershing-2 medium-range missiles. Moreover, the firm produces the antitank missiles of the Hellfire system and the guided Copperhead missiles.

Here we have briefly reviewed only the main (and far from all) Pentagon contractors.(9) But the defense departments of the second group of companies are also components of the American MIC. And in the fight to gain defense orders they use the influence of the entire corporation. The predominance of civilian production in their activities does not mean that they do not undertake everything to maximally increase the number of Pentagon orders. For example, for the Chrysler firm, the multibillion-dollar order for the M-1 tanks until 1982 not only guaranteed strong support from the government but also was a lifesaver against the troubles which had beset the car market.

Table

**Major U.S. Military-Industrial Concerns
and the Growing Degree of Their Dependence Upon Defense Production***

Corporations	Primary Military Orders, \$ billion		Share of Defense Product in Total Sales Volume, %	
	1977	1982	1977	1982
General Dynamics	1,372	5,891	47	98
McDonnell-Douglas	2,574	5,630	71	78
United Technologies	1,587	4,208	29	36
General Electric	1,520	3,654	9	14
Lockheed	1,574	3,498	46	64
Boeing	1,579	3,239	36	37
Hughes Aircraft	1,093	3,141	64	90
Kockwell International	1,480	2,690	25	35
Raytheon	1,041	2,262	36	41
Martin-Marietta	426	2,008	30	58

* G.N. Tsagolov, "Milliardy na oruzhiye: Voyenno-priomyshlennyy kompleks SShA" [Billions for Weapons: The U.S. Military-Industrial Complex], Moscow, Mysl, 2d Supplemented Edition, 1986, p 84.

The concern Texas Instruments, starting in 1951, converted to producing "computer brains" and rather quickly under the name of General Incorporated "bypassed" its strong competitors and became one of the major Pentagon suppliers. In 1984, this company in terms of profit equaled such "behemoths" as Northrop and Boeing.

Thus, the course of the U.S. ruling circles of accelerating the arms race creates good conditions for further enrichment and a growing influence for the weapons-producing monopolies.

The union of industrialists, the military and the government plays an important place in the structure and functioning of the MIC. It is quite apparent that here the dominant role is played by the personal union of highly

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General Electric	1,520	3,654	9	14
Lockheed	1,574	3,498	46	64
Boeing	1,579	3,239	36	37
Hughes Aircraft	1,093	3,141	64	90
Rockwell International	1,480	2,690	25	35
Raytheon	1,041	2,262	36	41
Martin-Marietta	426	2,008	30	58

* G.N. Tsagolov, "Milliard na oruzhiye: Voyenno-priomyshlenny kompleks SShA" [Billions for Weapons: The U.S. Military-Industrial Complex], Moscow, Mysl, 2d Supplemented Edition, 1986, p 84.

The concern Texas Instruments, starting in 1951, converted to producing "computer brains" and rather quickly under the name of General Incorporated "bypassed" its strong competitors and became one of the major Pentagon suppliers. In 1984, this company in terms of profit equaled such "behemoths" as Northrop and Boeing.

Thus, the course of the U.S. ruling circles of accelerating the arms race creates good conditions for further enrichment and a growing influence for the weapons-producing monopolies.

The union of industrialists, the military and the government plays an important place in the structure and functioning of the MIC. It is quite apparent that here the dominant role is played by the personal union of highly

placed military and emissaries of big business. The facts show, for example, that in 1959, 97 (out of the 100 investigated) leading U.S. defense companies which were responsible for 75 percent of all the contracts employed 768 officers who had retired with the rank of colonel and higher.

In recent years, the invasion of the military into private business has continued. In 1960, 100 of the leading military-industrial concerns employed 2,100 higher officers, that is, almost 3-fold more than 10 years previously. In 1975, due to leaving for defense business, the Pentagon lost 620 servicemen, and in 1976, 1,044. From 1979 through 1981, some 2,100 officers, generals and admirals moved from the Pentagon to the defense industry. According to the estimates of the U.S. General Accounting Agency, around 6,000 employees from the higher and middle levels of the Defense Department who left government service in the 1983-1984 fiscal year, are now employed in well-paid positions in the Pentagon's contractors. Many of them (45 percent) stated that their new duties require them to maintain contacts with former colleagues in the Defense Department while others (over 20 percent) admitted that they continue to be involved in the projects and programs with which they were concerned in the Pentagon. And this is very indicative.

The higher officers are used by the leaders of the corporations as "fixers" by which it is possible to gain advantageous military contracts from the Defense Department. One of the leading aviation industrialists Schenk said on this issue: "After World War II a new type of industrialist was born, the manager. He was a military man, usually with stars on his shoulders, who had responsibility for help in managing the largest business operations.... He brought with him into the civilian sphere enormous knowledge and effectiveness."(10)

At the same time, in the United States there is the extensive practice of a return of managers from the military-industrial corporations into the Defense Department. In 1975, this was 170 persons and in 1976, 374. In the apt expression of Senator W. Proxmire, "the revolving doors" between the defense industry and the Pentagon are not only open but spin at a crazy speed."(11)

Representatives of monopolistic capital from 1940 through 1967 have held the post of Secretary of the Army eight times, Secretary of the Air Force seven times and all the Secretaries of the Navy. The current Secretary of Defense C. Weinberger was the vice-president of the Bechtel Corporation. The Secretary of State G. Shultz also came from here. Due to influence in the government the Bechtel leadership has been able to obtain expensive defense contracts which meant good profits.

The former department chief of the RAND Corporation F. Ikle became the Undersecretary of Defense. Many other current leaders of the Pentagon also did not have the appropriate experience but were close to the leadership of the Reagan Administration which had come to power. Thus, the Secretary of the Navy D. Lehman prior to this had been president of the Abingdon Consulting Firm and was one of the Reagan advisors during the 1980 election campaign. The current Secretary of the Air Force V. Orr from 1970 through 1975 was the director of the Agency for Finance Questions in California and maintained

close contact with Reagan, while the Secretary of the Army J. Marsh was a partner in a law firm and an advisor to Reagan on legal questions.

An indicative example of the relationship of weapons business with the military-state and political spheres can be found in the California Northrop firm. In the 1970s, 343 military and government officials from the Pentagon and 17 highly-placed employees of the National Aeronautics and Space Administration (NASA) left government service in order to join the management personnel of the corporation. At the same time, 17 officials from the firm left it and became employees of the defense and space agencies. Six of the 11 directors of the Northrop firm, including the chairman of the board of directors T. Jones, worked previously in the State Department and defense agencies of the United States or those countries which purchase the products of this firm.

Thus, between the military, private business and the state apparatus there has come into being and is now functioning smoothly a complex and extended system of relationships, contacts and joint operations to allocate orders and profits as well as mutual support in the risky affairs of the MIC, bringing benefit to the participants of the complex. One of the main forms of collaboration of the defense and industrial circles is in the reciprocal and mass exchange of representatives. The Pentagon itself is a major property owner. It owns millions of hectares of land occupied by bases, barracks, testing ranges, training centers and other facilities. The value of the Pentagon's property at the beginning of the 1980s exceeded \$300 billion which is around 60 percent of all federal property and exceeds the total capital of the 15 largest U.S. corporations.

Science plays a noticeable role in the affairs of the MIC. The growth rate of its militarization in the United States has been one of the most acute problems going far beyond the development of scientific thought per se. The U.S. ruling circles view the scientific and technical potential for achieving military supremacy to what degree the balance of forces existing in the world can be disrupted.

Suffice it to say that the U.S. government's expenditures on research and development (R&D) of a military nature in 1980 reached almost \$14 billion, being 47.3 percent of all federal funds on R&D, or 20.8 percent of the total national expenditures on science and technology.(12) In 1981-1985, expenditures on the military aspects of R&D continued to grow.

For the 1985-1986 fiscal year, the administration requested around \$38 billion for conducting R&D and this was almost 26 percent more than was allocated in 1985. The allocated funds are to go for research and development of the ABM systems with space-based elements (around \$4 billion), the MX ICBM (around \$0.8 billion), Midgetman (\$0.6 billion), the Trident-2 submarine-based ballistic missiles (\$2.2 billion) and so forth.

The R&D for military purposes is being carried out by numerous scientific research centers or "think tanks" or "brain trusts." A large group of scientists is directly involved with the Pentagon. From this personnel many go to the White House staff and other government institutions. Understandably

they have a strong influence on the shaping of policy. The group is closely linked to many elements of the MIC.

As was announced by the UPI Agency, at present over 250 of the nation's universities and colleges cooperate with the defense agencies. In 1982, according to official data, the Pentagon concluded contracts with the nation's institutions of higher learning totaling \$852 million. This sum exceeds expenditures of the previous year by 20 percent. At present, major scientific discoveries are employed for developing and producing new weapons systems. The most refined means of mass destruction are being developed in scientific laboratories and research centers.(13)

The RAND Corporation is a typical "think tank" of the MIC. It serves the agencies of the Pentagon as well as NASA and the State Department.

Recently, the Center for Strategic and International Research at Georgetown University in Washington has been increasing its authority.

Johns Hopkins University holds one of the first places in the list of Pentagon contractors among institutions of higher learning. Its scientific developments of a military nature are assessed annually at almost \$236 million. The work done by the Massachusetts Institute of Technology is paid for with equal generosity.

The American Enterprise Institute (AEI) is closely tied to militaristic circles and the current administration. It employs both researchers from American universities as well as former state leaders including G. Ford, M. Laird and W. Simon. The nature of the institute's research can be judged from the published book "A Grand Strategy for the 1980s." Among its authors are Gen M. Taylor and Adm E. Zumwalt. Both fought in Vietnam, the former was in command of land operations and the latter at sea. Thus, imperialism draws on the talent of scientists and the achievements of human reason to prepare for a devastating war.

Thus, the rise and development of the U.S. military-industrial complex was brought about by objective patterns in capitalism. Many factors were the driving forces in the development of the MIC. One of the main ones has been the drive for world domination as proclaimed by U.S. monopolistic capital after World War II. The program adopted under the conditions of rapid scientific and technical progress by the U.S. ruling circles for achieving this aim has led to an unprecedented militarizing of the nation, to an arms race and to a subordination of all aspects of American life to the demands of the policy "from a position of strength."

Under these conditions there has been an unprecedented intertwining of ties, interests and goals of the private business magnates and the state leaders in the area of military policy and defense production. As a result, the real power of the MIC has constantly widened and precisely its activities now determine the nature of all the nation's domestic and foreign policy.

FOOTNOTES

1. "Materialy XXVII syezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 133.
2. Quoted in: B.D. Pyadyshev, "Voyenno-promyshlenny kompleks SShA" [The U.S. Military-Industrial Complex], Moscow, Voyenizdat, 1974, p 9.
3. V.I. Lenin, PSS [Complete Collected Works], Vol 34, p 191.
4. Quoted in: G. Green, "Zabytyy vrag" [Forgotten Enemy], Moscow, Izd-vo inostrannoy literatury, translated from the English, 1958, p 68.
5. P.A. Koistinen, "The Military-Industrial Complex. A Historical Perspective," New York, 1980, p 57.
6. Ibid.
7. G.N. Tsagolov, "Milliardy na oruzhiye: Voyenno-promyshlenny kompleks SShA" [Billions for Weapons: the U.S. Military-Industrial Complex], Moscow, Mysl, 2d Supplemented Edition, 1986, pp 69-70.
8. Generally for achieving their aims the corporations frequently resort to such methods as bribery, graft and so forth. According to the data of the magazine BUSINESS WEEK, around 400 American companies have been caught red-handed in illegal machinations and involving state and political figures. Boeing and Lockheed alone spent over \$30 million for bribes.
9. For a detailed list of the U.S. military-industrial corporations, see: G.N. Tsagolov, op. cit., pp 64-126.
10. Quoted in: B.D. Pyadyshev, op. cit., pp 97-98.
11. Quoted in: G.N. Tsagolov, op. cit., p 55.
12. PRAVDA, 5 February 1981.
13. KRASNAYA ZVEZDA, 16 August 1983.

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ON THE PAGES OF THE GDR MILITARY HISTORY JOURNAL MILITARGESCHICHTE

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 89-90

[Article by Col V.I. Kuskov, candidate of historical sciences; spelling of German proper names has not been verified]

[Text] The journal MILITARGESCHICHTE (Military History) has been published by the GDR Military Publishing house since 1962. It contains material on the history of military policy, wars and military art, armed forces, military equipment as well as military thought. Along with historical and theoretical articles, it prints documents, memoirs, military history information, reviews and annotations of books and bibliographic works. Since 1971, MILITARGESCHICHTE has introduced the following new headings: "Military Traditions" and "From the History of Military Technology."

The journal's contents has changed in accord with the development of GDR military history science. While in the 1960s its pages basically contained articles devoted to the history of World War II (1939-1945), in the 1970s and 1980s, the subjects have been significantly widened and material has appeared on the events of military history prior to 1918 and the postwar period and dealing with methodological problems. A significant place has been assigned to articles devoted to unmasking the bourgeois falsifiers of military history.

Military historians from the GDR, the Soviet Union and the other socialist states are the authors of MILITARGESCHICHTE.

The issues in 1986, in honor of the 30th anniversary of the GDR National People's Army [NVA] have contained articles examining the problems of military organizational development in the republic. These include primarily those such as "Thirty Years of the GDR National People's Army" by Maj Gen R. Bruhl (No 1); the article "Certain Problems in the Development of the NVA Ground Forces in the Seventies" by G. Hohn and P. Kostial; "The Problems of Training Medical Personnel in the GDR Armed Bodies (1949-1961)" by E. Zolner (No 2); "On the Question of the Military Policy of the SED [Socialist Unity Party of Germany] During the Period of the Full-Scale Development of Socialism in the GDR in the 1960s" by K.-P. Meisner (No 3); "A Week of Combat Cooperation--A Socialist Tradition in the GDR" by K.-U. Keubke (No 1); "The Development of Combat Cooperation Between the GDR NVA and the Czechoslovak People's Army in

the 1960s" by R. Wenzke (No 4); "13 August 1961. An Action for the Sake of Preserving Peace" by K. Grese and V. Hanisch (No 4); "The Second Party Conference of the SED on Establishing Armed Forces" by K. Schutze (No 6).

In employing numerous documents and archival materials, the authors have analyzed in detail the activities of the SED in carrying out Leninist principles in the organizational development of a socialist-type army under the conditions of the GDR. The articles have objectively disclosed the prerequisites for the establishing of the GDR Armed Forces as well as the main problems and particular features of their development.

The authors of articles on the GDR NVA have pointed out that the organizational development of the republic's Armed Forces has been positively influenced by the following factors: the theoretical and practical experience of the CPSU and the other fraternal parties in the area of military organizational development; the all-round aid and support of the Soviet Union; the establishing of the Barracks People's Police in the aims of defending the socialist victories and serving as the basis for the development of the NVA; the marked successes in establishing the principles of socialism and the struggle for the victory of socialist production relations in the republic.

The articles have also described in detail how year by year the military skill of the NVA servicemen has improved and how their combat association with the men of the Soviet Army and the other Warsaw Pact armies has grown stronger and developed.

On the occasion of the 40th anniversary of the Nuremberg Trial which was marked in 1986, the 5th issue of the journal published articles by H. Busse and K. Hessker "Forty Years of the Nuremberg Trial. On the Question of the Punishment of War Criminals for Crimes Against Humanity" and by N. Muller "The General Staff and the Wehrmacht Supreme High Command Before the Court of the Nuremberg Tribunal." These provide a class assessment for the crimes of the Nazi leaders, they set out in detail the complex tasks which were carried out by the International Court, they show the process of eradicating Nazi elements on GDR territory, they bring out the role of the GDR in bringing surviving Nazi criminals to justice, and persuasively unmask the bourgeois apologists of Nazism. These articles contain rich factual material and numerous documentary sources were employed in writing them.

Of significant interest are the materials published under the heading "Documents" such as "The Meaning and Tasks of the Conference of the Chiefs of Staff of the Army Corps in Frankfurt-am-Main on 21 January 1914" (No 1), "Names Used in the Indoctrination and Training of the NVA Servicemen and GDR Border Troops" (No 1, No 4), "Views of the Nazi German Command on Wartime Propaganda" (No 3), and recollections of associates of the former GDR Minister of National Defense, Army Gen G. Hoffmann about his life and activities (No 6).

A number of articles was devoted to unmasking the aggressive policy of imperialism and to the problems of the struggle of the progressive forces for maintaining peace and international security at the present stage. Among them were the articles by M. Puschel ("Support of France for PGR Military Policy in

the 1960s and 1970s" (No 1); T. Dobias, M. Jakisch and W. Roschlau "The NATO Strategy of Forward Lines and the Influence of the FRG on Its Development Up to 1963" (No 2); B. Heiman "On the 30th Anniversary of the Collapse of Imperialist Aggression Against Egypt" (No 4); S. Sommer "At the Start of the Struggle for Nuclear Disarmament" (No 4) and others.

In the journal a significant place has been devoted to the military history up to the present time. This includes the article by the Soviet historian V. Buganov "The Streltsy in Russia (16th Century--Beginning of 18th)" (No 2); the authors of the GDR J. Lampe "The Position of the German Social Democrats on the First Balkan War," K. Holzapfel "The Basel Compromise Peace of 1795," G. Schnitter "The Prussian King Frederick II as a General and Military Theorist" (No 3), G. Otto "The Battle of Verdun" and G. Fesser "The Battle of Jena and Auerstedt in 1806" (No 5).

Under the heading "Scientific Information" are articles devoted to important military history dates: "The 25th Anniversary of the GDR Army Museum" (No 1), "On the 250th Anniversary of the Death of Eugen von Savoy" (No 2), "On the 50th Anniversary of the Military Putsch in Spain" (No 3), "The 30th Anniversary of the GDR Military Publishing House" (No 4), "On the 50th Anniversary of the Defense of Madrid" (No 5) and others. Under this same heading were published the bibliographic article of N. Bugay and H. Hirz on the new Soviet literature on the history of the Great October Socialist Revolution and Civil War (No 3), the analytical reviews of the military history journals of Poland for 1981-1983 (No 1), the Soviet Union for 1985 (No 3), the CSSR for 1984-1985 (No 6), the U.S. journal MILITARY AFFAIRS for 1984-1985 as well as information on international conferences dealing with the problems of military history and held in 1986.

The section "Criticism and Bibliography" provides reviews and brief summaries of numerous new books by authors not only of the GDR but also other foreign countries, predominantly the Soviet Union. In 1986, the journal published reviews of the works of M.A. Gareyev, "M.V. Frunze--voyennyy teoretik" [M.F. Frunze--Military Theorist], N.M. Shilintsev "Stranitsy proletarskoy solidarnosti" [Pages of Proletarian Solidarity], A.I. Cherepanov "Pole ratnoye moye" [My Battlefield], V.I. Chuykov "Missiya v Kitaye" [Mission to China], Ye.F. Ivanovskiy "Ataku nachinali tankisty" [The Assault Was Started by the Tank Troops], A.T. Altunin "Zvezdy nad Visloy" [Stars Over the Vistula], and G.N. Shinkarenko "Nesushchiye fakel" [Torch Bearers] (No 1), M.F. Yuryev "Vooruzhennyye sily KPK v osvoboditelnoy borbe kitayskogo naroda v 20-40e gody" [Armed Forces of the CCP in the Liberation Struggle of the Chinese People in the 1920s-1940s], B.G. Sapozhnikov "Narodno-osvoboditelnaya voyna v kitae v 1947-1950 gg." [The People's Liberation War in China in 1946-1950], N.A. Kirsanov "V boyevom stroyu narodov-bratyev" [In Battle Formation of Fraternal Peoples], F.D. Sverdlov "Frontovymi dorogami Litvy" [By the Front Roads of Lithuania] (No 3), V.A. Zolotarev "Rossiya i turtsiya" [Russia and Turkey] (No 4) and V.M. Ivanov "Marshal M.N. Tukhachevskiy" (No 5).

In these and other articles the reader will find much interesting and useful information on military history subjects.

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INTERNATIONAL FORUMS ON MILITARY HISTORY PROBLEMS

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 91-96

[Conference report by Col A.S. Yakushevskiy, candidate of historical sciences and O.A. Rzheshhevskiy, doctor of historical sciences, professor]

[Text] The closer contacts become between nations and peoples, the stronger their desire to know more about one another. The search for the new forms of exchanging information is becoming a characteristic feature in the development of modern science and culture. In particular, different colloquiums and symposiums have begun to be held. Thus, in October 1986, in the Soviet Union (Moscow) the first Soviet-American colloquium was held on the problems of the history of World War II and in the United States (Colorado Springs), an international symposium on the subject "The Evolution of Russian and Soviet Military History." These forums became an arena of heated political debates on many questions of military history. Their participants often voiced diametrically opposed viewpoints, particularly as concerned consideration of the lessons of history in resolving present-day world problems. Our representatives had to defend the historical truth against encroachments by reactionary bourgeois theorists. The benefit gained as a result of the frank and direct dialogue was obvious: a decisive rebuff was dealt to the bourgeois falsifiers of history, and the Soviet viewpoint was again explained concerning the development of events in the prewar period and World War II; a clear notion was gained concerning the directions of military history search in the NATO states as well as about the differences in the views of various Western historians.

The Moscow Colloquium

Upon invitation from the USSR Academy of Sciences, ten American historians basically professors from various U.S. universities, arrived in Moscow to participate in a Soviet-American colloquium on the problems of the history of World War II. Participating in the colloquium was one American military historian, Col D. Glantz, the chief of the Directorate for the Study of the Soviet Army under the U.S. Army Research Center located in Fort Leavenworth, Kansas. The delegation was headed by a professor from Rutgers University (Newark, New Jersey) W. Kimball. Participating in the work of the colloquium on the Soviet side were co-workers from the Institute of USSR History and

Institute of World History under the USSR Academy of Sciences, the Military History Institute of the USSR Ministry of Defense, the History Institute of the Belorussian Academy of Sciences, as well as certain other Soviet scholars who are specialized on the problems of the history of World War II. The Soviet delegation was headed by the chief of the Sector for the History of the United States and Canada under the Institute of World History of the USSR Academy of Sciences, Prof G.N. Sevostyanov.

Over a period of 3 days, from 21 through 23 October 1986, more than 20 papers were heard at the colloquium. Each of these evoked a sharp debate.

The U.S. historians devoted basic attention to Soviet-American relations in the prewar period and the first 3 years of World War II. Their papers and speeches took up in detail the reasons which caused the F. Roosevelt Administration in 1933 to recognize the Soviet Union and establish diplomatic relations with it, as well as the response of the U.S. ruling circles and public to the foreign policy measures of the USSR in 1939-1941 and the start of the Great Patriotic War. In restricting themselves to merely reviewing the diplomatic aspects of the prewar period, they avoided going into the essence of Nazism and showing its anti-Soviet and antideocratic nature, and they avoided speaking about the policy of the Western powers to "conciliate" the Nazi states and which led to World War II; they said nothing about the Nazis' anti-Soviet military plans in the autumn of 1939 and the spring of 1940. At the same time they attempted to distort Soviet-German relations and the measures of the USSR to ensure the security of its frontiers in 1939-1940. The one-sidedness and tendentiousness of the American speeches evoked an appropriate response from the Soviet side. Here a number of facts voiced by our historians and viewpoints defended by them was a sort of revelation for certain American colleagues.

In the course of the debate, the Soviet historians criticized the traditional bourgeois interpretation which could be heard in certain American papers concerning the aims of the Soviet-German Non-aggression Treaty of 23 August 1939 and the distorted description of the content of the Soviet-German talks in November 1940. They drew attention of those present to the fact that the Soviet government was forced to accept Germany's proposal to sign the non-aggression treaty with it only after England and France had broken off the political and military talks with the USSR. Before the breaking off of the Moscow talks, this act did not enter the plans of Soviet diplomacy. In the extremely dangerous situation which developed in the summer of 1939 for our nation, under the conditions of the threat of the establishing of a united anti-Soviet front of international imperialism, the Soviet Union was forced to show vigilance and activeness in order to maintain its sovereignty. It did not have any territorial claims against other countries. Having concluded the treaty with Germany, the Soviet government for a time brought the nation out from under the immediate blow by the Nazi aggressor, and gained time for strengthening the defense capability and the preparation of its Armed Forces to rebuff the enemy.

In contrast to the American historians, the Soviet participants in the colloquium in their papers raised the larger problems of the preparations for and course of World War II, and linked them to the present-day international

situation. The paper of Prof G.N. Sevostyanov, for example, took up the problems of collective security which arose in 1933-1938 and on the basis of new materials showed the activities of the USSR to organize a collective rebuff of Nazi aggression and showed that due to the opposition of the Western powers it was impossible to establish an effective system of collective security. Doctor of Historical Sciences, Maj Gen I.A. Babin (Military History Institute of the USSR Ministry of Defense) took up the main areas of strengthening Soviet defense capability in the prewar years, and concluded the necessity of strengthening our nation's defense might until the Soviet proposals had been adopted for eliminating nuclear weapons and reducing conventional armaments. In the paper "On the International Position of the USSR on the Eve of the Great Patriotic War," the Editor-in-Chief of the journal SSHA--EKONOMIKA, POLITIKA, IDEOLOGIYA, V.M. Berezhkov pointed out that just as in July 1941 Nazi propaganda explained the necessity of a campaign against the USSR by the presence of a "Soviet threat" to Germany and all of Europe, so at present U.S. imperialist propaganda is using the same bugbear to justify a new notch in the arms race and Star Wars. Doctor of Historical Sciences D.M. Proektor (Institute of World Economy and International Relations of the USSR Academy of Sciences) in his paper gave special importance to the Battle of Moscow, to its role in the global balance of forces in World War II and strengthening the anti-Hitler coalition, and to its effect on the greater authority of the Soviet Union as a world power. Many important problems were brought out also in the speeches by other Soviet historians.

The colloquium participants substantially complemented the paper by Prof M. Stoler on the problems of the second front in Soviet-American relations in 1941-1942, particularly that portion where it stated that the United States was sincerely in favor of a landing in Europe in 1942, but did not have the necessary resources for this and was unable to surmount English resistance to this plan.

In the course of the discussion, Soviet historians (G.F. Baydukov, O.A. Rzheshevskiy, A.S. Orlov and others) with the help of persuasive arguments proved that the Western Allies, regardless of certain difficulties, in 1942 did have the opportunity to land their troops in Western Europe. This was supported by the fact that, in the first place, in the West, Germany would be unable to rebuff the invasion (only 35 weakened German divisions were located there), and secondly, the Western Allies possessed a sufficient number of men and weapons for an invasion (by the end of 1942, the United States had 72 divisions and England had 65; the Americans alone had 10,000 combat aircraft and 400 ships).⁽¹⁾

In the Soviet speeches, a sound scholarly criticism was leveled against the desire of the U.S. historians to prove, referring to the note of W. Churchill of 10 June 1942, that the Western Allies did not pledge to open a second front in 1942. This note, as the Soviet scholars pointed out, was of the nature of a one-sided statement and for this reason it must not be viewed separately from the coordinated and jointly adopted documents and generally from the talks on the given question and in the course of which the Soviet delegation in the interests of reaching agreement on a second front made a number of substantial concessions (a reduction in deliveries, and an agreement to

exclude from the text of the Anglo-Soviet Treaty the question of recognizing the western Soviet frontiers).(2)

The rejection of the landing in 1942, in the opinion of Soviet historians, is to be explained by the abandoning by the Western Allies of a general coalition strategy, by a disregard of Allied obligations toward the USSR and by a consideration of just their selfish goals. At the same time the United States and England did not wish to lose such an ally in the war against Germany as the USSR. After the Soviet Army had dealt a tangible defeat to the Nazis at Moscow, the American military strategists hurried to put together a plan for accumulating troops on the British Isles for an invasion of Europe. Precisely at this time Washington decided to make the initiative to invite Soviet representatives to the United States for talks on the question of the second front. It was also important for the U.S. government to pacify the American public which was demanding an opening of the second front. On 11 April 1942, President F. Roosevelt invited the Soviet counsellor of the embassy to the United States A.A. Gromyko to make a visit and entrusted to him a personal message to I.V. Stalin. The message stated the American desire to "ease the critical situation" on the Soviet-German Front and help the Soviet Union in destroying the Nazi armies and materiel better than had been done up to then.(3) It is noteworthy that American historians prefer not to recall this message from the president, as it promised much more than the United States intended to do.

The papers of Profs W. Kimball and T. Wilson were marked by being full of facts, including new ones. They pointed out that the U.S. military-political leadership in the summer and autumn of 1941 did not fully recognize the importance and scale of the armed struggle on the Soviet-German Front. In defining its attitude toward the war which had commenced on 22 June 1941, the Roosevelt government, in the words of T. Wilson, endeavored first of all to emphasize its own moral interest in the struggle of the Soviet Union, as the enemy of Nazism, but was in no hurry to provide it with material aid. This led to a situation, as T. Wilson admitted, that American aid in 1941-1942 was comparatively meager and could not play a substantial role in the struggle of the Soviet people.

The paper of the American Col D. Glantz on the subject "American Perspectives on Eastern Front Operations in World War II" attracted particular attention from the Soviet participants of the colloquium. The interest was caused, on the one hand, by the untraditional positing of the very subject of the paper and, on the other, by the official position of the speaker, one of the leaders of the military history service of the U.S. Army. While all other papers dealt with the events of 1933-1941, the paper by Glantz dealt with how the United States during World War II and after its end perceived and does perceive the armed struggle on the Soviet-German Front as well as the actions of the Soviet troops. The presented paper is proof of the presence of stagnation phenomena in American bourgeois historiography of the Great Patriotic War of the Soviet Union. It again affirmed that U.S. historians are focusing chief attention not on an objective depiction of the struggle of the Soviet people against the Nazi invaders, but on using a distorted history of this struggle for anti-Soviet and anticommunist purposes. At the same time,

the paper showed the contradiction inherent to bourgeois historiography between the cognitive (applied scientific) and ideological functions.

According to the conclusions drawn by Glantz, in the United States a "distorted notion" has prevailed up to the present concerning the importance of the Soviet-German Front in World War II and that the Americans feel that the Soviet Union played a "secondary role" in the defeat of Nazi Germany. "Only a few of the events of the 20th Century," the paper stated, "are dealt with without distortion and prejudice. Of the major events this was reflected to the greatest degree in the treatment of World War II, particularly the war on the Eastern Front, the Russo-German War. Digression from the truth, incomplete treatment and outright tendentiousness in all areas led to the creation of an inaccurate or distorted history of the war and contributed to the taking root of incorrect notions and hostility."(4)

In recognizing that bourgeois authors distort the history of the war of the Soviet people against the Nazi invaders, Glantz explains this by the dominant influence on the shaping of American notions about events on the Soviet-German Front of memoir and research works by former Nazi generals and officers and which came out immediately after the war and were widespread in the United States. They were all marked by tendentiousness and in every possible way extolled the actions of the German troops. Starting in the 1960s, the United States began publishing works by American and English authors on the Soviet-German Front but the "German views" continued to prevail in them. As an example, Glantz gives the book by E. Zimke "From Stalingrad to Berlin" written almost completely on the basis of German sources. Glantz considers the only exception to be the books by the English historian J. Erickson "The Road to Stalingrad" and "The Road to Berlin" and in which the author has drawn widely on Soviet sources and statistical data. However, the works by Erickson are known only to a narrow academic circle and for this reason have not had a substantial impact upon the views of the Americans concerning the Soviet-German Front. "The entire period from 1945 up to the present," said Glantz in the paper, "...has been dominated by German views on the war on the Eastern Front.... As a result these views have taken root in the textbooks for secondary schools and colleges as well as in the curricula of the U.S. military schools. And what is even more important, they have created the basis for judgments concerning the present-day Soviet Army."(5)

The class position of Col Glantz and those who stand behind him was clearly reflected in the attacks on Soviet literature dealing with the Great Patriotic War. In showing at times a readiness to criticize certain ideas of bourgeois historiography, Glantz and his like-thinkers continue to pursue anti-Soviet, anticommunist aims. They have carefully studied the historical material in order to use it for preparing the United States and the American Armed Forces for a war against the USSR and the other socialist commonwealth countries. In this instance, these researchers approach the study of history from the positions of realism, as they are working in the interests of the development of the armed forces and the combat readiness of the troops in the imperialist powers. Their works are designed for a comparatively narrow circle of military specialists.

However, the basic mass of U.S. bourgeois literature about World War II, particularly about the Soviet-German Front, is being created, as the colloquium held in Moscow showed, as grounds for various military-political concepts of imperialism and for influencing the population in a spirit of anticommunism and anti-Sovietism and hegemonic imperialist aspirations. Such literature is designed to combat the communist ideology and extol imperialist policy. For this purpose the bourgeois historians treat the problems of World War II in a prejudiced manner and primarily those which are of a sociopolitical and philosophical-sociological nature. These include: the reasons and guilty parties of the war, the contribution of various states of the anti-Hitler coalition to defeating the fascist-militaristic bloc and liberating the enslaved peoples, and the reasons for defeat and the sources of victories. Many of these problems evoked a sharp debate among the participants of the Soviet-American colloquium. Soviet historians employed the colloquium in order to rebuff those who distort the truth in interpreting a number of important problems in the history of World War II. In the process of the colloquium, both sides were clearly persuaded that a frank debate helps to improve the understanding of one another as well as elucidate the positions of the sides.

The Symposium in the United States

From 1 through 3 October 1986, an international seminar on the subject "The Evolution of Russian and Soviet Military History" was held in Colorado Springs, the United States, by the Air Force Academy which is one of the centers of military history research. Participating in it were representatives of the United States, Great Britain, Canada, the FRG, France and the USSR. There were most Americans who were co-workers from various military institutions, universities, the CIA, State Department, as well as historians and diplomats. Organizational preparations for the symposium were provided by the History Chair of the Air Force Academy (Chief of the Chair, Col, Prof C. Ridel).

The symposium was held in a situation of the widening influence of the Soviet peace initiatives and the fierce resistance to them by the U.S. reactionary circles and primarily the military-industrial complex. It consisted of five sessions: "Military Heritage of Imperial Russia" (leader, Professor at the University of California, N. Ryazanovsky); "Soviet Military Doctrine" (leader, Air Force Attaché at the U.S. Embassy in the USSR, Col R. Burley, Ph.D.); "The Great Patriotic War" (leader, Chairman of the U.S. Commission for Military History, Brig Gen (Ret) D. Collins); "The USSR as a Military Super Power" (leader, Lt Gen (Ret) R. Furlong); concluding (Chairman, Professor at Indiana University R. Burns). Also speaking at the last session was the consultant to the British Cabinet M. Macintosh, the scientific leader of the Military History Directorate of the Bundeswehr E. Klink and a representative from the French Higher Institute of National Defense J.C. Romer.

Each session heard two or three papers and the opinion of a commentator and there was a discussion of the material in the form of questions and answers. Speaking as commentators were the Professor of the U.S. Naval Academy C. Fuller, the leader of the Foreign Directorate of U.S. Military Intelligence D. Dziak, the professor from the University of Georgia E. Zimke and a

representative of the State Department, Ambassador L. Hansen. On two subjects ("Service in the Tsarist Army" and "The Soviet Serviceman"), special papers were read by the professor from the University of Toronto D. Keep and the U.S. Military Attaché to France, Brig Gen R. Lajoie.

The symposium was aimed at intensifying an analysis of USSR military history and generalizing the already extant results in order to more productively utilize the results for evaluating modern military doctrine, military art and combat capability of the Soviet Armed Forces in terms of the military plans, strategy, tactics, combat training and ideological influencing of the personnel in the U.S. Armed Forces. A number of the participants from the NATO countries endeavored to utilize the symposium rostrum for anti-Soviet propaganda referring to the myth of the "Soviet military threat" and various fabrications relating to the approaching 50th anniversary of the start of World War II. Certain papers showed a tendency for a more or less objective view of the reality of military history: "Service in the Tsarist Army" by the Canadian Professor D. Keep; "The Development of the Offensive in Depth: A Soviet Operational Maneuver" by Col D. Glantz; "The Contribution of the Soviet Air Forces to Achieving Strategic Aims" by the Vice Marshal of the Royal Air Force A. Mason and certain others.

Individual papers, in particular that by Brig Gen R. Lajoie and the recent leader and now the consultant at the Center for Soviet Research of the Royal Sandhurst Academy (Great Britain) P. Veiger "The Functions of Military History in the Soviet Union" had an openly anti-Soviet nature.

The tone was set in this area by D. Dziak in his disinformation on prewar Soviet policy. He repeated the well-known lie that the 1939 Soviet-German Treaty opened the way to World War II. P. Veiger endeavored to present Soviet military history science as "a means of communist propaganda" and discredit the works by Soviet historians, speculating on the ignorance of them among a significant portion of the audience. E. Zimke repeated his previous assertions that "even in 1945, the Soviet Air Force had not reached the level of skill of the German Luftwaffe" remaining silent to the question posed to him of how, in this instance, the Soviet Air Forces as early as 1943 had permanently won over-all air supremacy and even in the very difficult year of 1941 had been able to achieve advantages in the course of the Battle of Moscow. Also far-fetched and unproven was the thesis of the Acting Director of the International University of Field Staffs D. Thompson on the "transformation" of Soviet military doctrine from a defensive to an offensive one just when the Soviet Strategic Rocket Troops were established. The commentary of Ambassador L. Hansen was kept in the spirit of the traditional ideas of the State Department.

The paper of the Soviet representative explained the theoretical and methodological ideas of Soviet historical science, the bases of the Marxist-Leninist concept of our nation's military history, the sources and succession of the defensive nature of Soviet military doctrine as brought out in the Political Report of the General Secretary of the CPSU Central Committee M.S. Gorbachev to the 27th CPSU Congress. The new achievements of Soviet historians were shown and the fallaciousness of a number of theses and conclusions given at the symposium was brought out; the opinion was expressed

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STRATEGEM

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 11-18

[Article published under the heading "Soviet Military Art," by Col Gen V.N. Lobov]

[Text] The history of wars shows that in all times military leaders have given great importance to strategem. They endeavored to force on the enemy false notions concerning their troops and intentions and thereby establish better conditions for victory.

The founders of Marxism-Leninism repeatedly pointed to the importance of strategem. F. Engels, in investigating wars, explained the setbacks of the Prussian Army during the Franco-Prussian War (1870-1871) to neglect of procedures for misleading the enemy. He criticized the military leaders of the feudal period for the fact that they fought "without any strategems."(1)

V.I. Lenin had high regard for the strategem question. He wrote that "there are no wars without stratagem,"(3) and that "it is essential to endeavor to catch the enemy by surprise...."(4) and "be able to use the inflexibility...of the enemy and attack it when it least expects an attack."(5)

The experience of the employment of stratagem has accumulated over many centuries. This is clearly shown by world history and the history of our motherland.

For example, the methods of armed combat of the ancient Slavs are instructive. Against the routine tactics of the enemy which fought in such formations as the phalanx and cohort, their soldiers successfully employed the strategem: they enticed the enemy troops into positions advantageous for themselves and then attacked. "Often they abandoned their loot as if out of fear," wrote the "Strategicon," "and retreated into the forest and then, rushing by surprise from there, caused great losses to those who approached the loot."(6)

The skillful employment of various strategems was a characteristic trait in the military art of Medieval Russia. Thus, in the Neva Battle (July 1240), victory for the Russian troops over the numerically superior Swedish forces was ensured by well organized reconnaissance, by the covert and rapid moving

up to the enemy camp, and by the surprise attack against it. In the Battle on Lake Chudo (April 1242), the heavily armed German knights advancing in a wedge were opposed by Aleksandr Nevskiy with a battle formation designed to encircle the enemy as well as a surprise attack by an ambush regiment. In the Kulikovo Battle (September 1380), Prince Dmitriy, having employed a skillful maneuver, prevented the link-up of the Tatar-Mongols with their allies and anticipated the enemy in occupying the advantageous positions, and then disrupted a simultaneous attack by the enemy infantry and cavalry which was aided by the skillful forming up of the battle order of the Russian troops. A surprise attack by the ambush regiment completed the enemy's defeat.

Numerous examples of well employed strategem were demonstrated by Bogdan Khmelnitskiy in the Liberation War of the Ukrainian and Belorussian peoples for their independence (1648-1654). In the battles, particularly at Korsun and Pilyavtsy, he widely employed skillful methods for splitting the enemy forces, launching surprise attacks against them, encircling and destroying them piecemeal.

Peter I gave great attention to the question of strategem. He had high regard for the ability to defeat the enemy "with easy effort and little blood," and for this reason always required initiative and strategem. By skillful maneuvering which combined the stubborn defense of fortresses, ambushes, raids and surprise attacks, the Russian troops weakened the Swedish Army and prepared conditions for its defeat in the general engagement at Poltava (June 1709). The configuration of the Russian battle formation employing an original system of redoubts was unexpected for the Swedes. As a result, the enemy forces were split and it came under artillery cross-fire. An important role was also played by the deception of the enemy on the strong and weak sectors in the formation of Russian troops. The men of the best trained regiments were reclothed in the uniform of new recruits and took the main thrust of the Swedes. These and other strategems as well as the steadfastness and valor of the Russian soldiers determined the decisive victory of the Russian Army over the foreign invaders.

Subsequently, the forms of strategem underwent further development in the generalship art of P.S. Saltykov in the Battle of Kundersdorf (August 1759), P.A. Rumyantsev on the Kagul River (July 1770) and so forth.

The richest arsenal of original strategems was employed by the great Russian general, A.V. Suvorov. These mirrored his knowledge of the enemy and the thorough assessment of the situation, exceptional inventiveness and flexibility of mind, originality of concept, precise calculating, the ability to make a certain risk, boldness, daring, tenacity in achieving the goal. He frequently resorted to camouflage and disinformation of the enemy, and widely employed covert actions, lightning maneuvers and surprise attacks. There is no need to describe all the "secrets" of A.V. Suvorov and due to which he achieved victories in the engagements and battles at Rymnik (September 1789), Izmail (December 1790), in the Italian Campaign (April-August 1799) and the Swiss Campaign (August 1799) as well as many others. They gained world renown and are one of the most important components in the battle successes of the Russian Army.

Suvorov's "science of winning" underwent further development in the generalship activities of M.I. Kutuzov. His use of strategem both on the strategic and tactical scale always corresponded to the specific situation and each time differed. In the Russo-Turkish War (1806-1812), M.I. Kutuzov, in commanding an army of 26,000 men, by skillful maneuvering and by confusing the enemy, enticed a portion of the Turkish Army of Ahmet-Pasha (60,000 men) from the right to the left bank of the Danube, cut off its escape route to the fortress of Rushchuk, surrounded it and forced it to surrender. The Taruta Maneuver of the general in the Patriotic War of 1812 was an example of amazing military wisdom and the finest strategem, when the Russian Army of 100,000 men literally disappeared before the eyes of the French, and then, having taken up a good strategic position, doomed the Napoleonic troops to inevitable defeat.

Strategem was successfully employed in the Russo-Turkish War (1877-1878) in crossing the Danube in the Zimnitsa area and in the nighttime assault on Kars; in the Russo-Japanese War (1904-1905) in the nighttime battles in the defense of Port Arthur.

The age of imperialism made adjustments in the form and methods of conducting armed combat. Strategems also changed and their role increased in achieving victory. As is known in the course of World War I, after the formation of a continuous front, the difficult problem arose of breaking through a positional defense. All attempts to resolve this by traditional methods, as well as by employing new but still not numerous weapons (tanks, aircraft and gas) did not produce positive results. And then for yet another time in history strategem played a major role! A noteworthy example of this was the successful offensive by the Southwestern Front under the command of Gen A.A. Brusilov (May-July 1916).

In preparing the operation, the plan was based upon the idea of breaching the front on the main sector combined with a simultaneous offensive on a number of other sectors of the front. In this manner the enemy would be confused as to the sector of the main thrust, its forces would be tied down on a broad front and the employment of reserves would be rendered difficult. "If I...attacked at one place," explained A.A. Brusilov later, "then there would have been the same failure as Ivanov in 1915 and Evert and Kuropatkin in 1916, but I acted in my own manner, with a wide front. This was my method whereby...no one knew where was the real offensive and where was the feint."(7)

The troops of the front strictly observed the measures related to the covert preparation for the offensive. Combat engineer work was carried out only at night, and by morning the structures were carefully camouflaged. Viewable sectors of the unit positions were covered with artificial screens. The assault groups and the reserves were positioned in the rear and only several days prior to the start of the offensive were they moved up through the communications trenches to the forming-up places which were an extensively developed system of trenches previously dug a distance of 200-300 m from the forward edge of the enemy defenses. The artillery took up firing positions only during the night prior to the offensive.

As a result of the covert preparation and the unexpected employment of the new method of advance on a wide front, for the first time the problem was solved

of breaching the enemy defenses on an operational scale. The Russian troops breached the fortifications of the Austro-Hungarian Army in an area of 550 km and advanced to a depth of 60-150 km, in causing enormous losses to the enemy.

The Brusilov Offensive determined the ways for employing strategem in World War I. Having borrowed his experience in preparing for and in the course of the Amiens Operation (August 1918), the French troops achieved surprise and dealt a decisive defeat to the German troops.

After the victory of the Great October Socialist Revolution, diverse strategems were actively employed by the talented military leaders and generals of the Soviet Army. Skillful feints were demonstrated by the division chief D.P. Zhloba at the Nevinnomyssk Station in the battles against Denikin. G.I. Kotovskiy masterfully employed methods to mislead the enemy in the taking of Odessa, S.M. Budennyy did the same in the liberation of Voronezh. The Perekop-Chongar Operation (7-17 November 1920) conducted by the Southern Front under the command of M.V. Frunze was a brilliant example of achieving surprise. In the history of the Civil War there are many other examples of the employing of a strategem and linked to the names of V.I. Chapayev, V.K. Blyukher, I.E. Yakir, I.P. Uborevich, M.N. Tukhachevskiy, S.S. Kamenev, A.I. Yegorov and others.

The experience of World War I and the Civil War was carefully studied, generalized and employed in the aims of further developing Soviet military art. In the practical training of soldiers and commanders, great attention was given to the use of strategem, the importance of which was confirmed by the combat operations at Lake Khasan (1938), in the Khalkhin-Gol River area (1939) and in the Soviet-Finnish War (1939-1940).

Particularly noteworthy in this regard was the operation to defeat the Japanese militarists at the Khalkhin-Gol River. A distinguishing feature in the combat operations of the Soviet-Mongolian troops was the integrated nature of the measures to employ strategem as well as their planning. Precise coordination of the efforts of all the staffs and political bodies and strict supervision over the carrying out of the designated measures determined the success of the operation. Simultaneously with the plan for the forthcoming operation, a plan was also worked out for the operational and tactical deception of the enemy and this included a series of interrelated measures aimed at creating the impression for the enemy that our troops were going over to a strong defense, to conceal preparations for the offensive and thereby achieve surprise.

Particular attention was given to keeping the overall concept and plan for the forthcoming operation a secret. "In order that the enemy did not gain information on the offensive operation," recalled G.K. Zhukov, "the working out of a plan for a general offensive on the staff of an army group was carried out personally by the commander, the military council member, the chief of the political section, the chief of staff and the chief of the operations section. The commanders and chiefs of the branches of troops and the chief of the rear services worked only on special question, according to a plan approved by the commander....

"As the time approached for the start of the operation, the various categories of command personnel were successively informed of the operation's plan, starting from 4 days and ending with 1 day prior to the start of hostilities. The soldiers and commanders received their battle missions 3 hours prior to the start of the offensive."(8)

In the aim of misleading the enemy on the nature of the forthcoming operations, an entire program of radio and telephone conversations was worked out and implemented employing a simple code on preparations for the defensive; leaflets and pamphlets were published for the soldier on the defensive and these were dropped into the positions of the enemy troops.

All movements, concentrations and regroupings were carried out solely at night and under the cover of noise created by simulating sound units, aircraft flights, as well as the firing of artillery and small arms.

The premature moving up of the troops into the forming-up places was categorically prohibited. The assault groups were moved up into them during the night before the offensive. Tank units were moved up to the forming-up places in small groups from various directions, immediately before the start of the artillery and air softening up.

As a result of a skillful combination of camouflage and deception measures with other measures to achieve surprise, the Japanese troops were caught by surprise and suffered a crushing defeat.

The Great Patriotic War from the very first days confirmed the important significance of strategem in armed combat. Where our troops covertly prepared for an operation and the enemy was misled, success was always ensured.

Soviet troops in the initial period of the war endeavored primarily to check the enemy thrust and prevent it from quickly breaking through to vitally important centers of our nation. At the same time, a particular role was played by the covert concentration of men and weapons for the surprise launching of counterstrikes and counterattacks against the exposed enemy flanks.

As combat experience was gained, the commanders began to more skillfully employ in their own interest the weak aspect of the enemy's offensive tactics where, having broken through our defenses on a narrow front, the enemy drove deeply with its mobile formations predominantly along roads, thereby leaving exposed the flanks and rear of its assault groupings. Considering such enemy tactics, the Soviet troops covertly concentrated on the flanks and launched surprise attacks against it. They also widely employed ambushes and nighttime combat.

The victory of the Soviet Army at Moscow and Stalingrad demonstrated that the covert preparation of the troops for launching attacks and the more advanced and diverse methods of misleading the enemy to a large degree ensured the success of the counteroffensive. Strategem had become an inseparable part of the Soviet troop offensive operations.

For example, of significant interest is the Belgorod-Kharkov Operation (3-23 August 1943). The strategem of the commander of the Voronezh Front, Army Gen N.F. Vatutin, was by simulating and feigning preparations for an offensive by the front's right wing to conceal the true axis of the main thrust on its left wing. For this purpose on a spurious sector, in the Sudzha area, the concentration of a combined-arms army and tank army was feigned as well as their preparations for an offensive. The simulation was carried out in accord with an elaborated plan of measures aimed at demonstrating in the first stage (26-31 July) the arrival, unloading, moving up and deployment of troops and staffs in the concentration areas and then (31 July-2 August) the intensifying of reconnaissance and reconnoitering, growing radio traffic and the moving up of the troops to the forward edge. At the same time, the enemy was disinforming by disseminating rumors among the troops and population about a major troop concentration and the offensive being prepared.

The simulation and disinformation were directed by a specially established staff which had been provided with the necessary men and equipment. As a result of the effective execution of a range of measures to mislead the enemy and to provide camouflage, the strategem succeeded completely. The attention and forces of the Nazi troops to a significant degree were distracted from the area where our troops were preparing to launch the main thrust and this ensured the success of the operation.

The Great Patriotic War provides other instructive examples of employing strategem. Thus, in the Bobruysk Operation (24-29 June 1944), the commander of the First Belorussian Front, Army Gen (from 29 June MSU) K.K. Rokossovskiy selected for launching one of the thrusts by the front a sector where forested-swampy terrain prevailed and which the enemy considered virtually impassable and for this reason did not expect an offensive by major forces here. The covertly prepared and surprise attack by formations of the 65th and 28th Armies and the I Guards Tank Corps to the south of Parichi caught the enemy by surprise and this contributed to the rapid breaching of its defenses and to the quick development of the offensive in depth.

In preparing the Iasi-Kishinev Operation (20-29 August 1944), in the aim of establishing assault groupings, a major troop regrouping was covertly carried out. In the Second Ukrainian Front (commander, Army Gen R.Ya. Malinovskiy), all the mobile formations and a majority of the combined-arms formations were redeployed from the flanks to the center. In the Third Ukrainian Front (commander, Army Gen P.I. Tolbukhin), the main forces of the 57th, 37th and 46th Armies were concentrated on the Kitskan bridgehead, from where they planned to launch the main thrust. At the same time, the establishing of dummy assault groupings was simulated on other sectors. These measures of strategem along with other factors ensured the high results of the operation with 22 Nazi troops divisions being surrounded and defeated.

The commander of the First Ukrainian Front, MSU I.S. Konev, in the course of the Sandomierz-Silesian Operation (12 January-3 February 1945), having suddenly turned the 3d Guards Tank Army and the I Guards Cavalry Corps to the south into the rear of the enemy Silesian grouping, misled the Nazi Command on the axis of the front's main thrust. He forced the enemy to hurriedly pull

its troops from the Silesian Industrial Area so that the Nazis were unable to destroy it.

Also instructive was the employment of strategem in the defeat of the Kwantung Army during the Manchurian Operation (9 August-2 September 1945). Here, considering the particular features of the theater of operations, full use was made of the strategem experience gained in the defeat of the Japanese militarists at Lake Khasan, the Khalkhin-Gol River, and in the operations and battles of the Great Patriotic War. At the same time, in the preparations for and in the course of the Manchurian Operation, the forms of strategem underwent further development.

The planning of this operation was carried out in a situation of strictest secrecy. A strictly limited number of persons was permitted to work out the operation's plan. The work was based upon the personal assigning of tasks by the commander-in-chief and commanders, to the inferior leaders, the hearing out of their decisions and the providing of help in planning combat.

Great attention was given to keeping secret the strategic regrouping of large troop contingents to the Far East as well as to carrying out interfront and army regroupings. Correspondence and conversations related to the shifting of the troops were prohibited; the stations for servicing the trains and the unloading stations were assigned numbers; a number of troop trains was passed through the junction stations without a halt and their maintenance was carried out at intermediate stations; in the border areas of the Far East, the individual groups of troop trains were moved only during darkness, and on the Maritime Railroad which ran close to the frontier, the trains were also unloaded at night; the disembarked troops were immediately removed to the concentration areas and carefully camouflaged.

Along the entire route on the trains the commanders, the political bodies, the party and Komsomol organizations carried out extensive work with the personnel to maintain state and military secrecy. For example, the instructions to the soldiers and sergeants prepared by the political section of the 39th Army emphasized that "it is enough for a randomly dropped word, an incautious phrase, excessive verbosity and the desire to boast of combat feats in the presence of outsiders for a military secret to be given away and become known by enemy spies."(9)

The regrouping, concentration and deployment of troops in the forming-up position were carried out observing the requirements of secrecy. All troop movements were carried out solely at night. Vertical screening fences and overhead screens were set up along the roads which could be viewed from enemy territory. The troops were halted in forests and ravines for rests and halts. In the steppe areas of Dauria and Mongolia the tanks, motor vehicles and guns were sheltered in specially dug pits over which were screens or canvas. The concentration areas of the arriving formations and units were designated along a broad front and at a distance away which ensured their prompt arrival at the assembly and forming-up areas.

Basically, natural screens (forests, brush, ravines and so forth) were employed for camouflage in the concentration areas of the First and Second Far

Eastern Fronts. In the Transbaykal area, where such opportunities were absent, extensive use was made of regulation and improvised camouflage equipment. For example, the Transbaykal Front consumed around 400,000 square m of camouflage net, 64,000 individual nets for a rifleman, and 2,000 covers for guns and tanks.(10)

Movement in the forming-up areas, the burning of campfires and the felling of lumber were prohibited. Specially established groups supervised the observance of the secrecy measures. Officer-manned checkpoints were set up on all the fronts.

Of great importance was the range of measures to mislead the enemy. On each front a special plan was worked out according to which false rail and motor troop movements were carried out, and dummy concentration areas prepared. In the aim of misleading the enemy on the axes of the main thrusts, engineer work for establishing forming-up places was carried out on an extensive front. It was permitted to operate the radios of the units and formations which had been previously in the Far East. The leadership of the fronts wore insignias of somewhat inferior ranks than their actual ones. Many generals temporarily changed their last names. For a period of reconnaissance, officers changed into a soldier's uniform.

In the fortified areas, special teams were concerned with the harvesting of hay on all sectors viewable by the enemy. Officer personnel for a period of leave was sent to local sanitoriums and vacation houses. The enemy was also misled by the fact that the population was not moved out of the border area and a peacetime life along it was in no way disrupted. Simultaneously with the moving up of the troops to the state frontier, exercises were conducted so that the local inhabitants considered what was happening as ordinary military exercises.(11)

MSU K.A. Meretskov, in recalling the preparations for the Manchurian Operation, has written: "Seemingly, it would have been an impossible matter to keep the deployment of an army of 1.5 million men along an extended frontier a secret. But...almost everywhere we caught the Japanese by surprise: generally they were giving thought to the forthcoming operations and intensely preparing for them, however the specific date for the start of hostilities remained a complete mystery for them."(12)

The effect of surprise was so great and the assault launched against the Kwantung Army from the northwest was so strong that after it the army could not recover and suffered a crushing defeat.

The given historical material makes it possible to define strategem as an aggregate of measures aimed at achieving surprise in military operations and thereby creating additional opportunities for victory with the least expenditures of men, weapons and time. The main components of strategem are secrecy and misleading the enemy.

Secrecy, in turn, can be defined as a range of measures relating to vigilance, the keeping of military secrecy and camouflage with the aim being to ensure the survival of one's troops and the achieving of surprise.

Misleading the enemy or deception is a range of measures relating to disinformation, feints and simulation carried out in the aim of creating a false idea in the enemy about one's troops, future methods and forthcoming areas of operations. The aim of deception is to force on the enemy a plan which is advantageous for oneself, to cause the enemy to weaken his group, to divert attention, men and weapons from the areas of real combat to a false sector and thereby achieve surprise.

Of course, the definition given here of strategem and its components is not complete. Unfortunately, this concept has not been theoretically elaborated in a proper manner.(13) At the same time, the experience of the past irrefutably shows the importance which strategem has played in various historical periods and under various historical conditions. For this reason, there is an urgent need to study the acquired experience and improve it on a new basis.

The development of scientific and technical progress has led to the development of more modern equipment and weapons and to the appearance of new forms and methods of armed combat. They also exist among our probable enemies who in every possible way endeavor to conceal this.

Life requires that important questions be raised concerning the defense of the socialist fatherland and requires that the troops, commanders and political workers be instructed in the methods of strategem on the basis of the very rich historical experience. "Of lasting importance are military skill, boldness and strategem...as evolved in wartime," pointed out the USSR Minister of Defense, MSU S.L. Sokolov. "All of this should be taken into account as completely as possible in troop training practices in the indoctrination of the troops and naval forces and passed on to officers who do not have combat experience, considering, of course, present-day demands on their training."

FOOTNOTES

1. F. Engels, "Izbrannyye voyennyye proizvedeniya" [Selected Military Works], Moscow, Voenizdat, 1956, p 198.
2. [Not in text]
3. V.I. Lenin, PSS [Complete Collected Works], Vol 10, p 298.
4. Ibid., Vol 34, p 383.
5. Ibid., Vol 5, p 12.
6. Prokopyi Kesariyskiy, "Voyna s gotami" [The War Against the Goths], Moscow, Izd-vo AN SSSR, 1950, p 132.
7. "Mirovaya voyna 1914-1918" [The World War of 1914-1918], "The Lutsk Breakthrough," Moscow, Izd. Vysshego Voyennogo Redaktsionnogo Soveta, 1924, p 24.

8. G.K. Zhukov, "Vospominaniya i razmyshleniya" [Remembrances and Reflections], Moscow, Izd-vo APN, Vol 1, 1986, p 203.
9. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 210, inv. 371776, file 5, sheet 7.
10. "Inzhenernyye voyska Sovetskoy Armii v vazhneyshikh operatsiyakh Velikoy Otechestvennoy voyny" [Engineer Troops of the Soviet Army in Major Operations of the Great Patriotic War], a collections of articles, Moscow, Voenizdat, 1958, p 296.
11. "Vnezapnost v nastupatelnykh operatsiyakh Velikoy Otechestvennoy voyny" [Surprise in the Offensive Operations of the Great Patriotic War], Moscow, Nauka, 1986, p 51.
12. K.A. Meretskov, "Na sluzhbe narodu" [In the Service of the People], Moscow, Politizdat, 1968, p 418.
13. The concept of "strategem" is not explained in the "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia] and in the "Voyenny entsiklopedicheskiy s'ovar" [Military Encyclopedic Dictionary].

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FROM EXPERIENCE OF OFFENSIVE OPERATIONS ON RIGHT-BANK UKRAINE AT START OF 1944

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 19-27

[Article by Lt Col (Ret) S.N. Mikhalev: "From Experience of Offensive Operations on Right-Bank Ukraine at Start of 1944"]

[Text] The strategic offensive by the Soviet Army on the Right-Bank Ukraine (24 December 1943-17 April 1944) was one of the major ones during the Great Patriotic War. It developed on a front 1,300-1,400 km wide and was conducted with minimum operational pauses for almost 4 months to a depth of 250-450 km. Involved in the fighting on both sides were around 4 million men armed with 45,400 guns and mortars, 4,200 tanks and SAU [self-propelled artillery mount] (assault guns) and over 4,000 aircraft. As a result of the offensive, the First, Second and Third Ukrainian Fronts and the Second Belorussian Front, without having a substantial over-all superiority in men and weapons over the enemy, defeated the largest enemy grouping on the southern wing of the Soviet-German Front (Army Groups South and A), they liberated the Right-Bank Ukraine and a significant portion of Moldavia and created good conditions for launching new thrusts on the Brest, Lublin and Lwow axes as well as into the Balkans.(1) The Soviet troops demonstrated increased mastery in breaking through a deliberate enemy defense, in developing the offensive under the difficult conditions of the spring muddy season, as well as in surrounding and destroying large enemy forces.

As is known, the strategic offensive on the Right-Bank Ukraine included ten operations which were linked by a common over-all plan and carried out by fronts and groups of fronts with the involvement of long-range aviation, the National Air Defense Troops and on the maritime sector, the Black Sea Fleet and with the actions of all the forces being coordinated by the representatives of Hq SHC [Headquarters Supreme High Command], MSUs G.K. Zhukov and A.M. Vasilevskiy. These operations have been sufficiently studied and treated in the military history literature. Many of them were planned and conducted in the aim of surrounding and destroying opposing enemy groupings. Here the greatest success was achieved in the Korsun-Shevchenkovskiy Operation by the First and Second Ukrainian Fronts (24 January-17 February 1944) and which ended with the encirclement and complete destruction of ten enemy divisions and one enemy brigade.

However, in such operations as the Nikopol-Krivoy Rog carried out by the Third and Fourth Ukrainian Fronts, the Bereznegovatoye-Snigirevka and Odessa by the Third Ukrainian Front, it was not possible to completely rout the surrounded enemy troops. An analysis of the experience of preparing and conducting these operations makes it possible not only to better comprehend the reasons which had an unfavorable influence on the results of Soviet troop combat but also to more fully understand the process of the development of military art at the beginning of the third period of the Great Patriotic War.(2)

The over-all concept of the designated operations was based upon the idea of encircling and defeating the opposing enemy groupings. This was to be carried out, depending upon the specific situation, by various means.

Thus, in the Nikopol-Krivoy Rog Operation (30 January-29 February 1944), the main forces of the Third Ukrainian Front (commander, Army Gen R.Ya. Malinovskiy) were by an attack on the axis of Vladimirovka, Apostolovo, to reach the Dnieper from the north and in cooperation with troops of the Fourth Ukrainian Front (commander, Army Gen P.I. Tolbukhin) to surround and destroy the enemy grouping on the defensive in the Nikopol sector. Troops from the right wing of the Fourth Ukrainian Front had the task, by attacking to the northwest, of defeating the enemy on the left bank of the Dnieper and eliminating the enemy Nikopol bridgehead. Thus, the encirclement of the enemy grouping was to be carried out by pincer strikes of the two fronts.

In the Bereznegovatoye-Snigirevka Operation (6-18 March 1944), the Third Ukrainian Front was to launch the main thrust in the center of its area with the subsequent turning of a portion of the forces toward the left wing. By this maneuver they planned to cut off the enemy grouping on the defensive on the Nikopol sector, to surround and destroy it in cooperation with the 5th Assault Army and 28th Army advancing along the right bank of the Dnieper.

In the Odessa Operation (26 March-14 April 1944), the enemy was to be surrounded in the final stage by the turning of the mobile group of the Third Ukrainian Front from the Razdelnaya area to the south and southeast, along the lower courses of the Dniester. Only in this manner would it be possible to cut off the maritime grouping, to press it to the sea in the Odessa area and destroy it.

The advantageous configuration of the front line was taken into account in choosing the axis of the main thrust. Thus, the thrusts of the Third and Fourth Ukrainian Fronts in the Nikopol-Krivoy Rog Operation were launched against the base of the arc formed by the front in the lower reaches of the Dnieper, planning to come out in the rear of the surrounded enemy grouping by the shortest route. In the Bereznegovatoye-Snigirevka and Odessa Operations, the crucial factor in selecting the axis of the main thrust was the presence of bridgeheads, respectively, on the Ingulets and Southern Bug Rivers as these would provide the concentrating of the assault groupings of the fronts in the forming-up place for the offensive.

At the same time, with the start of the Odessa Operation, due to the fact that the troops of the 8th Guards Army had not been able to promptly widen the bridgehead on the right bank of the Southern Bug in the Novaya Odessa area

enough to deploy the men and weapons of the assault grouping on it, while on the right wing, in the area of Voznesensk, there had been a success, the axis of the main thrust of the Third Ukrainian Front had to be shifted from the center to its right wing. The change in the direction of the main thrust was expressed in the strengthening of the right wing armies with two rifle corps, the preferential supply of ammunition to them and the committing of the front mobile groups to the breach on this axis.(3)

Without having an over-all substantial preponderance over the enemy in men and weapons, the command of the front established superiority on the axes of the main thrusts by their bold massing at the expense of weakening the secondary sectors. In all the designated operations, the main forces of the Third Ukrainian Front were concentrated on the army breakthrough sectors which comprised 9-13 percent of the total width of its zone of advance. This made it possible to establish rather high operational densities here, with 1.5-2.5 km per rifle division, up to 100 guns and mortars and up to 16.5 tanks and SAU per kilometer of front (see the Table), thereby providing a double-triple and, in a number of instances, even more significant superiority over the enemy. Thus, on the breakthrough sector of the 8th Guards Army in the Bereznegovatoye-Snigirevka Operation, the Soviet troops surpassed the enemy by 4-fold for infantry and 10-fold for artillery. In the Odessa Operation, superiority on the axis of the main thrust of the Third Ukrainian Front was 4-4.5-fold for all indicators (with the exception of aviation).(4)

The fronts had a single-echelon configuration. The strength of the front reserves was limited. Thus, in the reserve of the Third Ukrainian Front by the start of each of the designated operations, there was one or two rifle corps which were employed for reinforcing the armies fighting on the main sector. The operational configuration of the armies consisted of one and more rarely two echelons, an army artillery group and the reserves. Ordinarily one or two rifle divisions were assigned to the army reserve with a single-echelon configuration.

In continuing the offensive and in surrounding the enemy groupings, the crucial role was assigned to the mobile groups of the fronts which included all the battleworthy tank, mechanized and cavalry formations existing in the front by the start of the offensive. The make-up of the mobile groups was determined depending upon the situation and the over-all concept of the operation. Thus, in the Nikopol-Krivoy Rog Operation the mobile group of the Third Ukrainian Front consisted solely of the IV Guards Mechanized Corps, as during this period there were no other mobile formations in the front. In the Bereznegovatoye-Snigirevka and Odessa Operations, two front mobile groups were organized for each: the first consisting of the reinforced XXIII Tank Corps with the horse-mechanized group of Lt Gen I.A. Pliyev fighting as the second.(5) The two mobile front groups were established in order to simultaneously surround the enemy groupings ahead of the left wing and to advance decisively in depth by the right wing of the front. In the Bereznegovatoye-Snigirevka Operation, the XXIII Tank Corps, in addition, was given the task of supporting the right wing of the horse-mechanized group against a possible enemy counterstrike.

Table*

Massing of Men and Weapons of Third Ukrainian Front
in Operations on Right-Bank Ukraine

Operations	3					4			
	1	2	5	6	7	8	9	10	
Nikopol-Krivoy Rog	184	<u>23</u> 12.5	<u>93.1</u> 65	<u>2,438</u> 73	<u>192</u> 89	<u>6.1</u> 1.6	<u>17</u> 105	<u>1.2</u> 8.3	
Bereznegovatoye-Snigirevka	160	<u>18</u> 11.2	<u>75.6</u> 34	<u>2,451</u> 40	<u>289</u> 95	<u>8.2</u> 2.5	<u>30.3</u> 81	<u>0.15</u> 13	
Odessa	158	<u>15</u> 9.4	<u>56.2</u> 35	<u>2,047</u> 32	<u>314</u> 97	<u>3.1</u> 1.5	<u>37</u> 62	<u>2</u> 16.5	

* The Table has been compiled from data of the TsAMO: folio 243, inv. 2902, file 352, sheet 88; file 358, sheet 8; inv. 2908, file 358, sheet 8; inv. 2917, file 89, sheets 336-354; file 93, sheets 5, 83-86, 160-161; file 94, sheets 4, 173-174, 197-198; inv. 2928, file 55, sheet 7; file 59, sheet 11; file 63, sheet 7; folio 244, inv. 3000, file 785, sheet 9; inv. 3004, file 48, sheet 67.

- Key:
- 1--Total Width of Zone of Advance of Front, km
 - 2--Total Width of Army Breakthrough Sectors; in the numerator, km, in the denominator in % of total width of front zone of advance
 - 3--Number of Men and Weapons in Assault Groupings; in the numerator, total, in the denominator, in % of total amount of men and weapons
 - 4--Operational Density; in the numerator, average in the front's zone, in the denominator, on the breakthrough sector
 - 5--Personnel in Rifle Division, 1,000 men
 - 6--Guns and Mortars
 - 7--Tanks and SAU
 - 8--Km per Rifle Division
 - 9--Guns and Mortars per km
 - 10--Tanks and SAU per km

The front operations commenced by the breaching of the enemy defenses on two, three and more sectors and as a result of this conditions were established for carrying out the operational envelopment and outflanking of the enemy groupings in the aim of their surrounding and subsequent destruction. In the Nikopol-Krivoy Rog Operation, success on the axis of the main thrust of the Third Ukrainian Front was achieved by the active fighting of the 37th and 6th Armies (commanders, Lt Gens M.N. Sharokhin and I.T. Shlemin) on the auxiliary sectors. Having taken the going over of the 37th Army to the offensive on the Krivoy Rog axis on 30 January as the thrust of the main forces, the enemy on

the first day committed two tank divisions to battle here. This significantly facilitated the breach of the enemy defenses on the main sector, where a day later, on 31 January, an assault was launched by the troops of the 46th and 8th Guards Armies (commanders, Lt Gen V.V. Glagolev and Col Gen V.I. Chuykov) while the IV Guards Mechanized Corps (commander, Lt Gen Tank Trps T.I. Tanashchishin) committed to the breach on 1 February over the following 6 days under difficult conditions of mud and a lack of roads advanced to a depth of 40 km (Diagram 1).

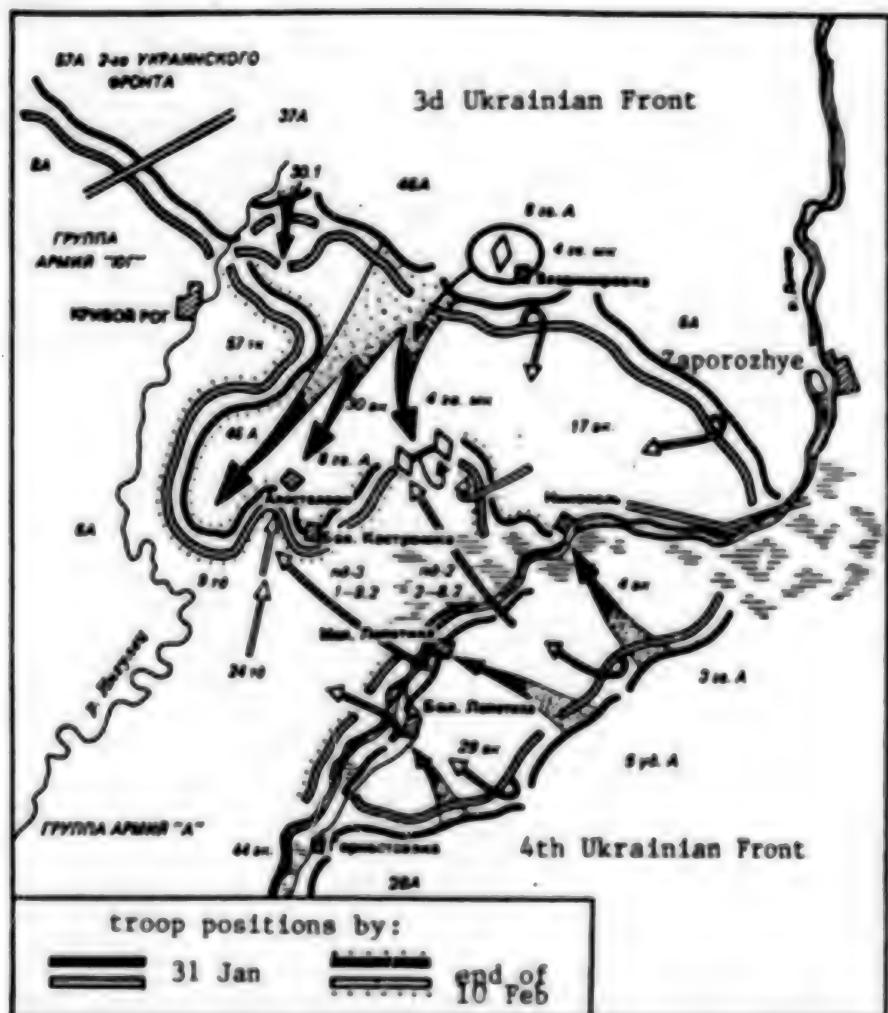


Diagram 1. Combat Operations of the Third and
Fourth Ukrainian Fronts on 31 January–10 February 1944
in the Course of the Nikopol-Krivoy Rog Operation

However, the troops of the front were unable to exploit the success, as the formations on the right bank of the 8th Guards Army, having taken Apostolovo and Bol. Kostromka, by 10 February were stretched along a front of over 60 km and had lost their assault force, while the IV Guards Mechanized Corps by this time had suffered significant losses in personnel and particularly in combat

equipment.(6) The results of the operation were also negatively effected by the insufficiently energetic operations by the troops of the right wing of the Fourth Ukrainian Front on the left bank of the Dnieper as this permitted the enemy during the period from 2 through 10 February, to remove five divisions from the Nikopol bridgehead and throw them against the Third Ukrainian Front. The enemy also returned here a tank division which had been previously directed to the Korsun-Shevchenkovskiy area. By launching a strong counterstrike, the Nazi Command succeeded in checking the main grouping of the front some 8-12 km from the Dnieper floodbanks and through a corridor along the right bank of the river during 5-10 February withdraw from the encirclement a significant portion of its Nikopol grouping without the heavy equipment and motor transport.



Diagram 2. Combat Operations of Third Ukrainian Front on 6-11 March 1944
in the Course of the Bereznegovatoye-Snigrevka Operation

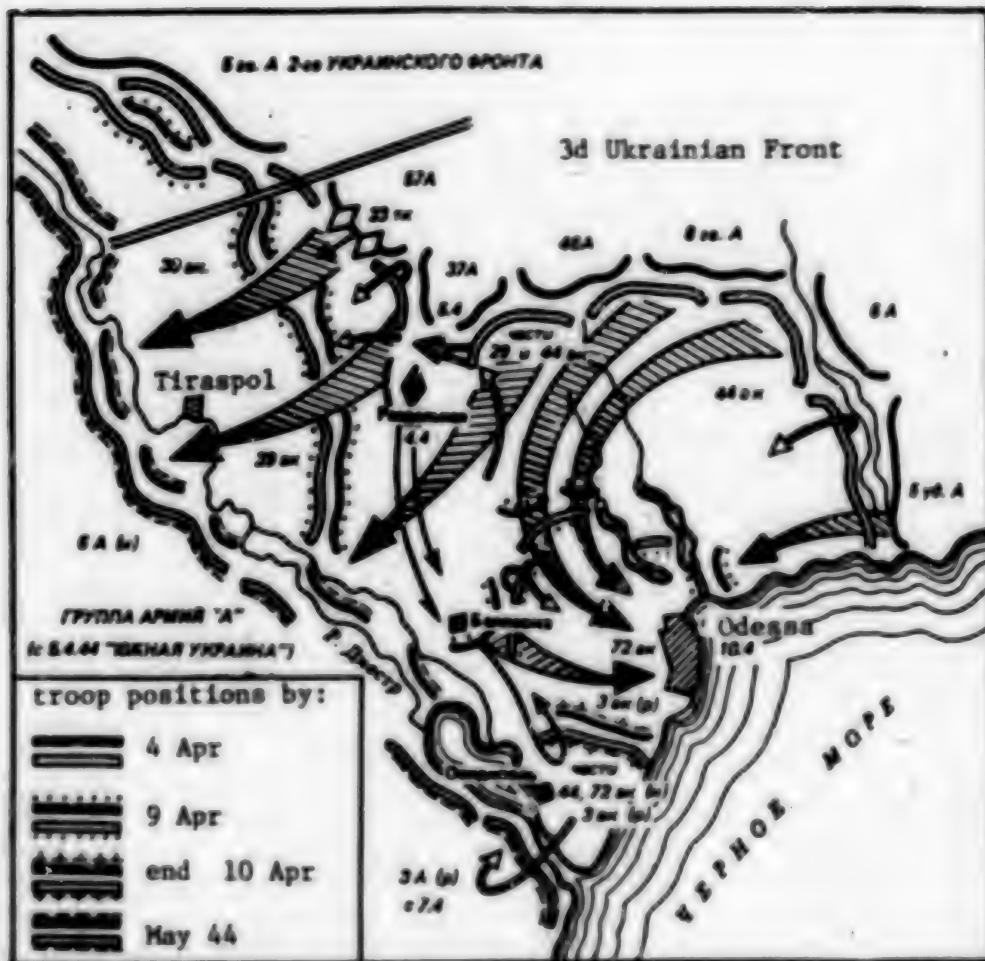


Diagram 3. Combat Operations of Third Ukrainian Front on 4-10 April 1944 in the Course of the Odessa Operation

Without having a sufficient amount of close support tanks, the rifle formations were unable to achieve a rapid rate of advance. Under these conditions, for ensuring the successful breakthrough of the enemy tactical defensive zone, the command of the front, for example in the Bereznegovatoye-Snigirevka Operation, was forced to employ a portion of the forces of the mobile groups and this led to a rapid decline in their combat capability in continuing the offensive in the operational depth.

With a single-echelon configuration of the fronts and armies, and this was a consequence of the significant lack of men and equipment in the rifle formations (from 50 percent in January to 60 percent in March),(9) the army and front reserves were employed during the first stage of the operation. As a result, after the committing of the mobile groups to battle, the command of the front, as a rule, was left without a sufficient amount of forces to effectively influence the course of combat in the operational depth.

The tank and mechanized formations which made up the mobile groups of the front also were significantly short of materiel. For example, in the IV

Guards Mechanized Corps by the start of the Nikopol-Krivoy Rog Operation there were 117 tanks and SAU (47.5 percent of the TOE number), and by the start of the Odessa Operation only 78 (31.5 percent of the TOE number). In the XXIII Tank Corps on the eve of the Bereznegovatoye-Snigirevka Operation, there were 93 tanks and SAU (36 percent of the TOE strength).(10) With such a strength the mobile groups were unable to establish a strong inner perimeter of encirclement. The rifle troops which did not possess great maneuverability were unable to quickly make use of the success of the mobile formations and promptly support them in fighting in the operational depth. Thus, the establishing of a dependable inner perimeter of encirclement was the most difficult task which was not successfully carried out in the designated operations.

A majority of the operations in the Right-Bank Ukraine was prepared quickly, from 3 to 13 days. For this reason a number of preparatory measures could not be carried out fully by their start. This was particularly true of the transporting and stockpiling of materiel, the repairing of combat equipment, the receiving of reinforcements and the regrouping of troops. For example, with the start of the Bereznegovatoye-Snigirevka Operation, two tank regiments and one SAU regiment assigned to the horse-mechanized group did not participate in the fighting as they were out of fuel. For an analogous reason the XXIII Tank Corps which was committed to battle on 8 March on the second day of the fighting went over to the defensive for 2 days.(11)

The weather conditions also had a negative effect on the course and outcome of the operations on the Right-Bank Ukraine. Due to the early thaw (it started at the end of January), the terrain was virtually impassable for all types of equipment. The difficult operating conditions led to a situation where the tank troops lost from 30 to 50 percent of the combat vehicles in the course of the fighting. Artillery on mechanical traction fell behind the troop battle formations by two or three moves. Low cloudiness and thick fogs impeded air operations. At crucial moments of fighting the troops experienced an acute lack of ammunition and fuel.

The muddy season and lack of roads greatly complicated troop command. The long-distance communications radios mounted on motor vehicles fell behind. Low-power radios of the RB and RBM type could not properly ensure radio communications. The staffs also did not keep up with the advancing troops. The most effective under these conditions would have been command by having the commanders move up to the battle formations on tanks with a small operations group. This is precisely what a majority of the tank formation commanders did.

At the end of 1942 and the beginning of 1943, Hq SHC, the General Staff, the command and staffs of a series of fronts gained significant experience in preparing and conducting major encirclement operations, but by the start of 1944 this had not yet become generally known, particularly on the army level. An analysis of documents related to the planning of the Nikopol-Krivoy Rog, Bereznegovatoye-Snigirevka and Odessa Operations indicates that in working them out the specific nature of encirclement operations were not always fully considered. For example, they did not establish the forces for creating the inner and outer encirclement perimeters, there was not sufficient clarity in

organizing cooperation of the pincer formations as well as the rifle formations with the mobile troops and proper attention was not paid to complete support for the outflanking (envelopment) maneuver against enemy groupings.

Combat experience at the start of 1944 decisively confirmed that encirclement operations were most effective when conducted by a group of fronts with their coordination by representatives of Hq SHC. Such a form of leadership ensured good conditions for the effective and immediate use of the men and weapons existing on the fronts as well as the prompt involvement when necessary of the reserves and resources of the Supreme High Command. Precisely in this manner they carried out the most successful encirclement operation in the 1944 winter campaign, the Korsun-Shevchenkovskiy. In the Nikopol-Krivoy Rog Operation, also carried out by the forces of a group of fronts, it was impossible to fully realize the advantages of this form for organizing combat due to the above-described reasons. Subsequently, a larger portion of the encirclement operations (24 out of the 32 in 1944-1945) was carried out groups of fronts. Only in 8 operations were the enemy groupings surrounded by the forces of just one front.(12)

Regardless of the fact that in the designated operations on the Right-Bank Ukraine, it was impossible to complete the encirclement and defeat of the large enemy groupings, significant successes were achieved. The nation recovered important areas of iron and manganese deposits in Krivoy Rog and Nikopol; Nikolayev and Odessa Oblasts and a portion of Moldavia were liberated; a decisive defeat was dealt to the troops of the 6th German Army and the 3d Romanian Army. With the elimination of the enemy Nikopol bridgehead, good conditions were established for the operations of the Fourth Ukrainian Front against the enemy grouping sealed off in the Crimea. The troops of the Third Ukrainian Front, in reaching the Dniester, captured bridgeheads which ensured the going over to the offensive in the summer of 1944 in the aim of surrounding the enemy Kishinev grouping.

The offensive by the Soviet troops on the Right-Bank Ukraine in being conducted under difficult conditions was a significant step ahead in developing and improving the methods for preparing and conducting offensive operations. These operations were characterized by an originality of concept, by the skillful choice of the axes of the main thrusts, by the decisive massing of men and weapons on these axes, by the extensive maneuvering of the mobile formations in the operational depth as well as by continuous troop command in a difficult situation.

The positive experience of these operations, like the conclusions from an analysis of certain failures of them, were successfully employed by the Soviet Army in the subsequent campaigns of the third period of the Great Patriotic War. The study and creative utilization of this experience, undoubtedly, will help improve the quality of the operational and combat training of the staffs and troops under present-day conditions.

FOOTNOTES

1. "Sovetskaya Voyennaya Entsiklopediya" [Soviet Military Encyclopedia], Moscow, Voenizdat, Vol 6, 1978, pp 490-492.
2. S.N. Mikhalev participated in these operations and was a staff officer of the LXVI Rifle Corps.
3. TsAMO [Central Archives of the USSR Ministry of Defense], folio 232, inv. 2900, file 729, sheets 13-14.
4. "Operatsii Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voynе 1941-1945" [Operations of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, Vol 3, 1978, pp 158, 162-163.
5. Established on 1 March 1944 (TsAMO, folio 3470, inv. 1, file 319, sheet 8) and consisting of the IV Guards Cavalry Corps, the IV Mechanized Corps and the 5th Separate Motorized Rifle Brigade. The group was reinforced by four tank regiments and two (five in the Odessa Operation) SAU regiments.
6. TsAMO, folio 3430, inv. 1, file 127, sheets 14-62.
7. On 11 March, the commander of the XXIII Tank Corps, Hero of the Soviet Union, Lt Gen Tank Trps Ye.G. Pushkin, was killed in battle; Maj Gen Tank Trps A.O. Akhmanov was appointed corps commander.
8. "Sovetskaya Voyennaya Entsiklopediya," Vol 1, 1976, p 450; Vol 4, 1977, p 185; Vol 5, 1978, p 599; Vol 6, p 22.
9. TsAMO, folio 243, inv. 2917, file 89, sheets 294-303; file 94, sheets 37, 65, 85, 87, 173, 197.
10. Ibid., inv. 2928, file 51, sheet 7; file 59, sheet 11; file 63, sheet 7.
11. Ibid., file 59, sheet 11; folio 3418, inv. 1, file 39, sheets 1-5.
12. "Voyennoye iskusstvo vo vtoroy mirovoy voynе (Strategiya i operativnoye iskusstvo)" [Military Art in World War II (Strategy and Operational Art)], Moscow, Izd. VAGSh, 1973, p 334.

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EXPERIENCE OF FRONT OPERATIONS WITH CROSSING OF MAJOR WATER OBSTACLES

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[Article by Col A.M. Sokolov, candidate of historical sciences: "Experience of Front Operations with Crossing of Major Water Obstacles"]

[Text] In the course of the front offensive operations in the Great Patriotic War, the troops of the Soviet Army crossed a large number of water obstacles. The carrying out of this task was an important and most complex component part of the offensive operations. It required from the men high skills and a great straining of moral and physical forces. Of particularly great importance were the crossing of large water obstacles (over 150 m wide) and the capturing of bridgeheads; this was usually carried out in the final stages of front offensive operations. An example of this would be the crossing of the Dnieper and Vistula without a pause and the capturing of bridgeheads on their western banks.

Combat experience shows that the successful crossing depended upon many factors which are also considered under present-day conditions.

The promptness and quality of organizing the crossing played a major role. The chief measures in organizing the crossing of wide water obstacles were provided for even in the preparing of the operations. Since such rivers were located a great distance from the forward edge, in the course of preparing for the offensive they worked out only the general questions of organizing the crossing and involved with the training of the troops, the preparing of crossing equipment and the procedure for moving it up and employing it. Instructive here is the working out of the questions involved in organizing the crossing of the rivers in preparing the Lwow-Sandomierz Offensive Operation (13 July-29 August 1944). The commander of the First Ukrainian Front, MSU I.P. Konev, not only focused the army commanders on the need to prepare for crossing the Vistula, but also issued special instructions on the support of the crossing, having determined the procedure for engineer support, the allocation and use of crossing equipment, its place in the operational configuration of the front and the armies, the sequence for moving up, the number of crossings which should be organized on the crossing areas of the field forces.(1)

The plan for crossing rivers was adopted, as a rule, before the main forces of the front reached the water obstacles. It set out the procedure, methods and times for their crossing by the forward detachments and main forces, the methods of defeating the enemy on the approaches to the river, as well as the tasks of the first-echelon armies and the aviation which should hit the retreating enemy troops and reserves.

The crossing tasks were given to the first-echelon armies ahead of time. Combat practices indicated that it was advisable to do this no later than 2 days before reaching the water obstacles in order to promptly establish the necessary grouping of men and weapons. Thus, the Commander of the Steppe Front, Army Gen I.S. Konev, gave the tasks to the first-echelon armies for the crossing of the Dnieper on 20 September 1943, when they were 70-150 km from the river. The crossing of the main forces was planned for 24 and 25 September, while the forward detachments would cross 24 hours previously. The armies of the First Ukrainian Front received their tasks for the crossing of the Vistula 1 or 2 days before, while those of the First Belorussian Front (commander, MSU K.K. Rokossovskiy) received them 2 or 3 days before.(2)

In approaching the water obstacle and as information was gathered about the enemy, as well as in accord with the developing situation, the tasks for the first-echelon armies and aviation were adjusted and the commander and staffs of the fronts did not have more than 24 hours for this. It was important that the staff be efficient in preparing the data needed by the commander for adopting the final plan for the crossing as well as in issuing the tasks to the troops.

Reconnaissance was of primary importance in the activities of the command and staffs of the fronts in organizing the crossing. For obtaining the necessary data, aviation was widely employed and this secured additional information on enemy defenses and the enemy grouping on the water lines, and particularly the location of the tank formations and operational reserves and the crossing areas. Characteristic in this regard was the conducting of reconnaissance in the First Ukrainian Front. Two days before reaching the Vistula (200-450 m wide), by the main forces, aerial photography had been carried out for the river and the enemy defenses on it, and as a result of this they established the nature of the defenses of the line and discovered operating crossings (five bridges and six ferry crossings). The assessing of all types of intelligence data showed that the strongest defenses had been established by the enemy on the sector of Josefow, Sandomierz. The front's main forces were aimed precisely at this sector (Diagram 1).

The troops of the front approached the major water obstacles on a wide front, as a rule, in the course of pursuing the enemy and this deprived the enemy of freely maneuvering the men and weapons. Thus, in September 1943, the troops of four fronts (Central, Voronezh, Steppe and Southwestern) reached the Dnieper on a front 700 km wide from Loyev to Zaporozhye, while the First Belorussian and First Ukrainian Fronts in the summer of 1944 reached the Vistula on a 300-km front. The pursuit on a broad front and the concentration of the main efforts on the most important axes did not allow the enemy to keep a solid defensive front. Large breaches were formed and the assault groupings of the Soviet troops rushed into these. The 3d Guards Tank Army (commander,

Lt Gen P.S. Rybalko) advanced rapidly in approaching the Dnieper. Regardless of the fact that it had made a 250-300 km march in order to be incorporated in the Voronezh Front, its formations, having begun to pursue the retreating enemy during the night of 20 September, were able to reach the Dnieper on 21 September.(3)

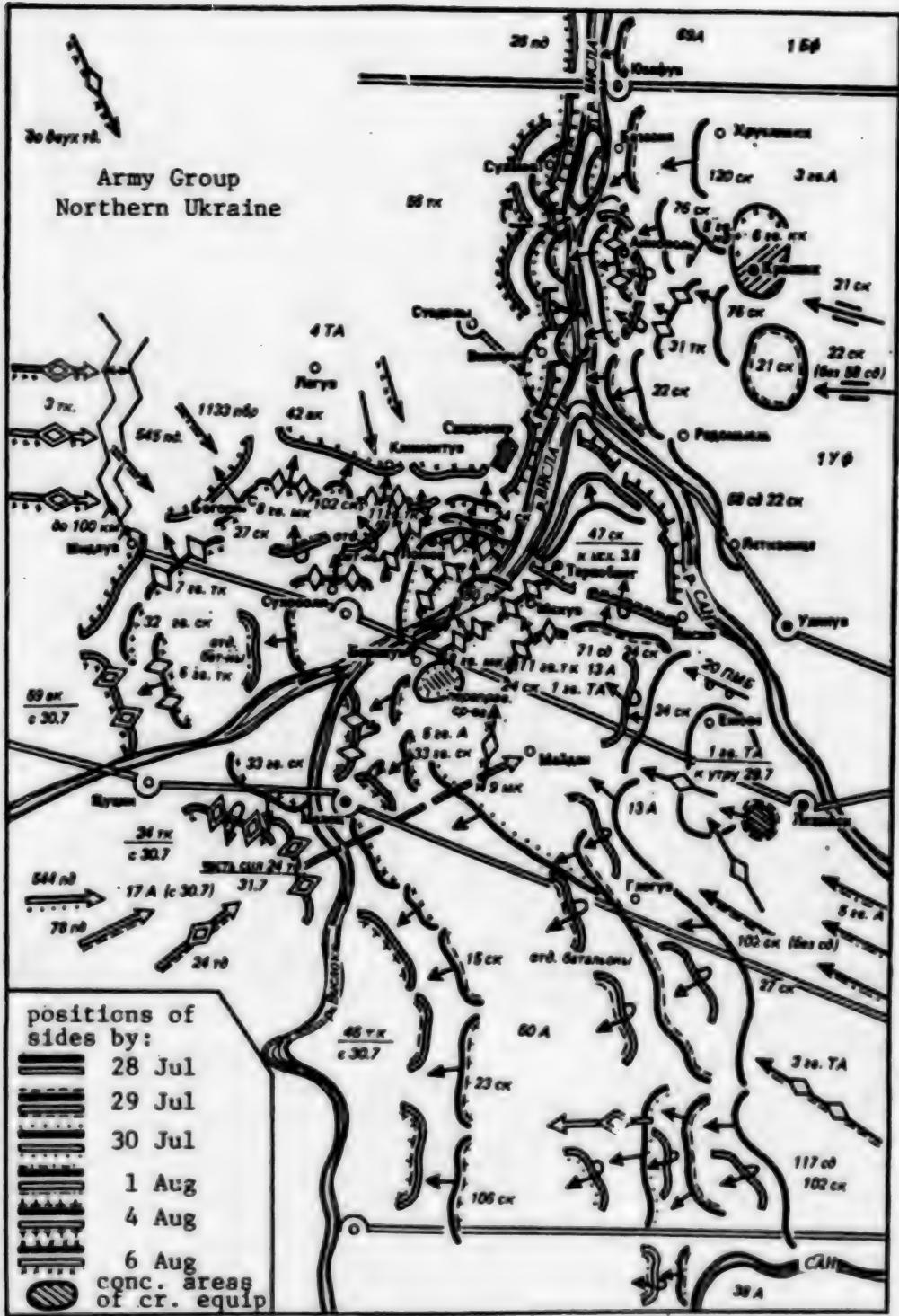
An important role was played by the tax against the enemy on the approaches to the water obstacles in the aim of decisively defeating the enemy troops and quickly reaching the river lines. These attacks were carried out by all available guns. The prime task was to prevent the enemy from an orderly retreat behind the water lines. The main efforts of the frontal aviation were also aimed at carrying this out. For this purpose, attacks were launched against enemy columns, road junctions and crossings. For example, on 24 September 1943, the aviation of the Steppe Front destroyed the railroad bridge in the Kremenchug area and prevented the planned crossing of the Dnieper by seven Nazi divisions. As a result, the enemy was unable to organize defenses on the opposite bank.(4)

The crossing of water obstacles without a pause was usually carried out in the same operational configuration in which the troops had approached the obstacles. The fronts, as a rule, had a single-echelon configuration with the establishing of a strong combined-arms reserve.

The rivers were crossed in the area that the troops of the fronts approached them. The length of the crossing zone depended upon the number of men and weapons to be involved, the width of the river in the front's zone of advance as well as upon the state of the defenses and the strength of the opposing enemy grouping. For example, the Steppe Front crossed the Dnieper in a zone 130 km wide, the Central Front in one 180 km, while the First Ukrainian Front crossed the Vistula in around 90 km. The commander of the front usually did not predetermine in what place each army would make the crossing. The river was crossed where the main forces of one or another field force arrived.

The main forces of the front were concentrated in narrow sectors which comprised 25-30 percent of the entire width of the crossing zone. The massing of men and weapons was achieved by redistributing them between the armies, by regrouping the mobile troops and by committing the second echelons and reserves to battle. Thus, major forces were concentrated in the sectors where the Vistula was to be crossed by the troops of the First Ukrainian Front and these were around 28 percent of the width of the entire zone of advance of the front; these forces comprised 62 percent of the combined-arms formations, 80 percent of the tanks and artillery and the main aviation forces. This made it possible on the main sector to achieve a decisive superiority over the enemy, to constantly build up the effort rapidly and quickly widen the captured bridgeheads.

The success of crossing major water obstacles in the final stage of front offensive operations depended largely upon the surprise of the crossing and this was achieved by pursuing the enemy rapidly, by the reaching of the river line by the Soviet troops before the retreating enemy units, by the successful choice of the time of the crossing and the sector for concentrating the main efforts, by the simultaneous crossing of many formations without a pause and



**Diagram 1. Crossing of Vistula Without a Pause by First Ukrainian Front
(29 July-6 August 1944)**

on a broad front. In the latter instance the enemy was unable to concentrate and employ its forces on any one sector. Thus, the enemy was caught by surprise by the rapid and simultaneous reaching of the Dnieper by four fronts and by the crossing of the river without a pause as well as extensive nighttime operations.

Usually forward detachments commenced the crossing. They were given their mission when they were one or two moves away from the river. For example, the task of crossing the Vistula by the forward detachment was given 50-60 km from the river.(6) Most often the forward detachment consisted of a rifle battalion reinforced with an artillery battalion (battery), one or two batteries of antitank artillery and a combat engineer platoon, and in the Lwow-Sandomierz Operation also by regulation crossing equipment.

The forward detachments of the 1st Guards Tank Army (commander, Col Gen Tank Trps M.Ye. Katukov) and the 350th Rifle Division (commander, Maj Gen G.I. Vekhin) of the 13th Army fought successfully on the Vistula. They quickly reached the water obstacle, reaching the Vistula simultaneously with the enemy at 1830 hours on 29 July 1944. Benefiting from the confusion of the enemy, the forward detachments by the end of the same day had crossed the river on sectors 7 km wide and had captured two bridgeheads on its left bank. On 30 July, one of these had been widened to 6 km along the front and up to 4 km in depth, while the other was up to 3 km in depth and along the front.(7) By the end of the day the bridgeheads had been linked up.

The bold and decisive actions of the forward detachments, in ending with the capture of bridgeheads, ensured the crossing of the rivers by the first-echelon formations which reached the water obstacle after them.

The crossing of the water obstacles by the main forces of the fronts and armies in the operational depth was carried out as the first-echelon formations reached them, when on the close approaches to the river the enemy flanks and groupings remained exposed. The crossing process by the first-echelon formations lasted, as a rule, 1-3 days. In the Steppe Front, the Dnieper, the width of which reached 250-1,200 m, was crossed most successfully by the 37th Army (commander, Lt Gen M.N. Sharokhin) and the 7th Guards Army (commander, Lt Gen M.S. Shumilov) (Diagram 2). The rapid and surprise reaching of the river by the formations, the bold and decisive actions and the skillful employment of crossing equipment made it possible to achieve major successes. Having repelled a strong enemy counterstrike, the armies widened the captured bridgeheads and combined them into one.

Mobile troops played an important role in the successful crossing of major water obstacles. The tank armies and formations, as a rule, crossed the rivers together with the combined-arms armies. For example, the Dnieper was crossed by the 40th Army (commander, Col Gen K.S. Moskalenko) together with the 3d Guards Tank Army of the Voronezh Front, while the Vistula was crossed by the 1st Guards Tank Army with the 13th Army (commander, Lt Gen N.P. Pukhov) of the First Ukrainian Front. The incorporation of the tank formations in the first troop echelon of the front for their involvement in the crossing made it possible to quickly reinforce and widen the bridgeheads and successfully repel enemy counterstrikes.

The success of the crossing was influenced by the rapid and continuous build-up of men and weapons on the opposite shore and capable of widening the bridgehead to an operational scale and repelling the counterstrikes of enemy reserves. The men and weapons were usually accumulated as the ferry and bridge crossings went into use. Of crucial importance was the prompt crossing of the artillery, particularly antitank, as well as tanks and the rapid strengthening of the bridgeheads in engineer terms.

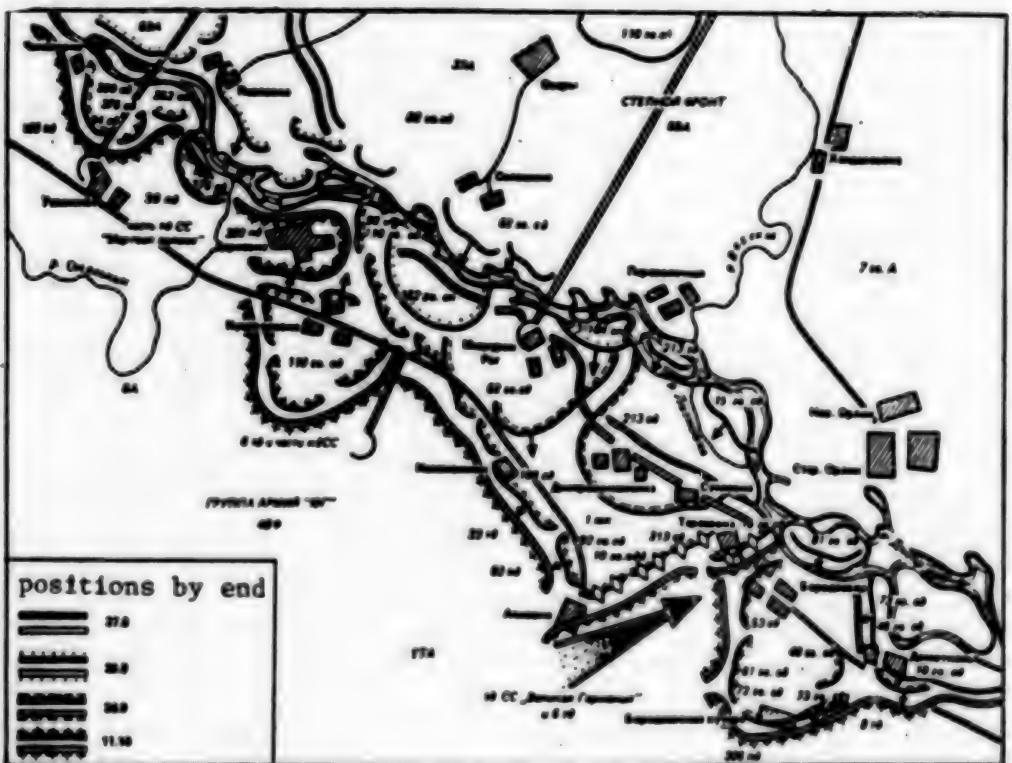


Diagram 2. Crossing of the Dnieper and Capturing of Bridgeheads by 37th Army and 7th Guards Army (September-October 1943)

The second echelons and reserves of the fronts were employed to build up the effort and achieve success. They were committed to battle with various tasks. For example, in the Battle for the Dnieper they participated in the crossing and in the fight to widen the bridgeheads. Thus, the second echelon of the Voronezh Front (commander, Army Gen N.F. Vatutin) which included the 27th Army (commander, Col Gen S.G. Trofimenko) was committed to battle in the aim of strengthening and widening the Bukrin bridgehead, while the 37th Army which was the second echelon of the Steppe Front, for increasing the rate of pursuit and crossing of the Dnieper.(8) In the Lwow-Sandomierz Operation, the 5th Guards Army (commander, Lt Gen A.S. Zhadov), the second echelon of the First Ukrainian Front, in being committed to battle was given two tasks: to continue the offensive on the left bank of the Vistula in order to widen the bridgehead, and complete the defeat of the enemy troop grouping on the right

bank.(9) The former pursued the aim of building up the front's effort to exploit the success achieved in the crossing of the river on the main sector while the latter was to support the flank and rear of the troops which had crossed the Vistula.

One of the crucial factors which ensured the successful crossing of major rivers was the extensive maneuvering of men and weapons to build up the effort in sectors where there had been a success. A vivid confirmation of this is the maneuvering of forces carried out by the command of the Voronezh Front in the course of crossing the Dnieper in the aim of shifting the main effort from the Bukrin to the Lyutezh bridgehead. Shifted here from the Bukrin bridgehead were the 3d Guards Tank Army, the VII Artillery Breakthrough Corps (commander, Maj Gen Art P.M. Korolkov), the XXIII Rifle Corps (commander, Maj Gen N.Ye. Chuvakov) as well as engineer, artillery formations and units. In addition, two rifle divisions, a tank brigade and artillery units were redeployed from the 13th Army which was fighting to the north.(10) In launching a surprise attack against the enemy from the Lyutezh bridgehead on 3 November, the troops of the front by 6 November had liberated Kiev. Here they had established a strategic bridgehead some 150 km deep on the right bank of the Dnieper and this was of important significance for conducting operations on the Right-Bank Ukraine.

The command of the First Ukrainian Front skillfully maneuvered its forces in crossing the Vistula and in capturing bridgeheads. After achieving success in the course of the crossing in the Sandomierz area, MSU I.S. Konev began to shift troops here from other sectors. In addition to the 4th Tank Army (commander, Col Gen D.D. Lelyushenko) the IV Guards Tank Corps (commander, Lt Gen Tank Trps P.P. Poluboyarov) and the XXXI Tank Corps (commander, Maj Gen Tank Trps V.Ye. Grigoryev), shifted to the Sandomierz bridgehead were the XXII Rifle Corps (commander, Maj Gen F.V. Zakharov) and a number of subunits and units of engineer troops from the 3d Guards Army (commander, Col Gen V.N. Gordov) which had only an insignificant success in the Annopol area.(11)

Artillery and aviation played an important role in a crossing. The command of the fronts and armies and the artillery staffs planned artillery support ahead of time for the crossing of the rivers. Several versions of the artillery support plans were worked out for operations where the water obstacles were to be crossed without a pause. Particular attention was given to having the artillery reach the crossing areas promptly. However, regardless of the efforts of the troops, this was not always possible. Thus, due to the lack of roads and the shortage of fuel, almost one-half of the artillery remained 50-150 km away by the time the troops were approaching the Dnieper in certain armies.(12)

In the course of the Lwow-Sandomierz Operation, the divisional, regimental and attached artillery moved continuously in the battle formations of the subunits and units, while the corps and artillery army groups were in the first-echelon formations. A portion of the artillery moved together with the forward detachments or behind them. This led to a situation where by the start of the crossing of the Vistula by the rifle divisions, the main mass of artillery was in its firing positions.

In the aim of achieving surprise, most often the rivers were crossed at night without artillery softening up. Fire was opened up only at the moment the enemy detected the crossing troops. If the crossing was to be made in daylight, it was preceded by artillery softening up. For example, in the crossing of the Vistula in the area of the 3d Guards Army artillery softening up was carried out while in the 13th Army this was reduced to a single intense shelling.(13)

Artillery operations in the crossing of major water obstacles in the course of front and army operations were characterized by extensive maneuvering. For example, the 5th Guards Army in the course of the fighting on the Sandomierz bridgehead was reinforced by the 38th and 60th Armies which had not taken part in the crossing, by five artillery regiments, while from the reserve of the front it received an antitank artillery brigade. By 9 August 1944, over 800 guns and mortars had been shifted to the Sandomierz bridgehead.(14) The decisive and promptly conducted maneuver of the artillery ensured the widening and strengthening of the bridgehead on the Vistula in the Sandomierz area.

In a crossing the main efforts of the aviation were directed at assisting the troops in approaching the water obstacles as well as in capturing and widening the bridgeheads. With the start of the crossing the aviation attacked artillery firing positions and impeded the approach of enemy reserves to the river.

However, in a number of operations, including the Lwow-Sandomierz, the activity of Soviet aviation during the first days of the crossing was low due to the lagging behind of the fighter bases and at times a shortage of fuel. Only with the building of airfields in the crossing area did its activity increase.

The successful crossing of major water obstacles without a pause depended upon the precise organization of engineer support and the able employment of regulation crossing equipment. Since most often there was not enough crossing equipment, correctly organized engineer support was very important. This was particularly apparent in the course of crossing the Dnieper. Thus, on the Voronezh and Steppe Fronts, the pontoon bridge brigades reached the river on the 6th-11th day of the crossing. They arrived piecemeal. The main reasons for the falling behind of the regulation crossing equipment was their movement outside the battle formations of the first-echelon formations and the lack of constant control over their advance by the commanders of the fronts and armies. The crossing commenced chiefly with improvised equipment and this had a negative effect on its pace as well as the time required to widen the bridgeheads.

The experience gained on the Dnieper told positively on the organized crossing of the Vistula in the course of the Lwow-Sandomierz Operation. Here engineer support was organized in a particularly clear manner and skillful use made of the crossing equipment. The commanders of the front and the armies gave great attention to the moving up of the crossing equipment behind the troops. The task of moving up to the Vistula was given to the pontoon bridge units 1 or 2 days prior to the start of the crossing. Light crossing equipment was moved up in the battle formations of the formations and units while the pontoon

bridge battalions traveled 15 km behind the forward units.(15) As they approached the Vistula, they concentrated in the area of the 13th Army in the Baranow area. By the end of the day of 30 July, that is, on the first day of the crossing, around nine N2P pontoon bridge parks from the 3d and 6th Pontoon-Bridge Brigades were located here.(16) This made it possible for the engineer troops to successively support the crossing by the first-echelon formations and then move across the front's main forces.

Due to the high mobility of the crossing equipment, particularly the pontoon-bridge parks which moved up to the Vistula simultaneously with the first-echelon formations, the crossing of the troops was carried out at a rapid pace. Over a period of 12 days, here they succeeded in moving four armies, including two tank ones, to the Sandomierz bridgehead.

The successful offensive operations involving the crossing of major water obstacles were ensured by conducting effective and continuous party political work. Here special attention was given to the moral and psychological training of the personnel. An important document in this work was the Special Directive of Hq SHC of 9 September 1943 concerning the decorating of soldiers and commanders for the successful crossing of major water obstacles. Before each operation the commanders and political workers informed the men of this. Great attention was given to the extensive propagandizing of the experience of crossing the water obstacles. For this purpose, conversations were held and materials propagandized on the methods and equipment for crossing. For example, in the formations and field forces of the First Ukrainian Front they published pamphlets and express sheets called "Pass Up the Line" and which described the men and subunits which had distinguished themselves in crossing rivers. Concreteness, flexibility and the employment of different forms and methods were important traits of the party political work.

FOOTNOTES

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 236, inv. 2698, file 364, sheets 24-25.
2. "Sbornik voyenno-istoricheskikh materialov Velikoy Otechestvennoy voyny" [Collection of Military History Materials From the Great Patriotic War], Moscow, Voenizdat, No 12, 1954, pp 8-9, 112; TsAMO, folio 236, inv. 2673, file 1033, sheets 235-237; folio 233, inv. 2356, file 440, sheets 19, 25.
3. "Stroitelstvo i boevoye primeneniye sovetskikh tankovykh voysk v gody Velikoy Otechestvennoy voyny" [Organizational Development and Combat Employment of the Soviet Tank Troops During the Years of the Great Patriotic War], Moscow, Voenizdat, 1979, p 187.
4. I.S. Konev, "Zapski komanduyushchego frontom 1943-1945." [Notes of a front commander 1943-1945], Moscow, Voenizdat, 3d Edition, 1982, p 60.
5. [Not in text]

6. TsAMO, folio 312, inv. 4245, file 179, sheets 34-36; folio 361, inv. 6079, file 266, sheets 339-340.
7. Ibid., folio 236, inv. 2704, file 126, sheet 282; file 11, sheet 43; folio 361, inv. 6079, file 280, sheet 149.
8. VOYENNO ISTORICHESKIY ZHURNAL, No 9, 1973, p 18.
9. TsAMO, folio 236, inv. 2673, file 1060, sheet 141.
10. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945], Moscow, Voenizdat, Vol 7, 1976, pp 254-255.
11. M.A. Polushkin, "Na sandomirskom Napravlenii. Lvovsko-Sandomirskaia operatsiya (iyul-avgust 1944 g.)" [On the Sandomierz Sector. The Lvov-Sandomierz Operation (July-August 1944)], Moscow, Voenizdat, 1969, pp 143-149.
12. VOYENNO-ISTORICHESKIY ZHURNAL, No 9, 1973, p 23.
13. TsAMO, folio 236, inv. 2700, file 246, sheet 88; file 255, sheets 226-228; folio 312, inv. 4259, file 182, sheet 95; inv. 4245, file 254, sheet 155.
14. M.A. Polushkin, op. cit., pp 143-144.
15. TsAMO, folio 361, inv. 6099, file 123, sheets 366-371; folio 236, inv. 2698, file 415, sheet 10; file 363, sheet 11; folio 299, inv. 3076, file 74, sheet 58.
16. Ibid., folio 236, inv. 2698, file 352, sheet 102.

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TANK ARMY ON THE DEFENSIVE

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 36-43

[Article by Col Yu.N. Sukhinin, candidate of historical sciences, docent: "Tank Army on the Defensive"]

[Text] The uniform tank armies organized during the years of the Great Patriotic War in an absolute majority of the offensive operations of 1943-1945 comprised the mobile groups of fronts (follow-up echelons) and were the basic means for exploiting a tactical success into an operational one. However, the war's experience showed that in a number of operations, albeit temporarily, the tank field forces were forced to also conduct defensive actions in the process of the offensive. They went over to the defensive most often during the concluding stage of the front offensive operations. The transition was made under various conditions. The developing situation had a substantial effect both on the organization of the defenses as well as the course of combat.

As is known, the Nazis, in endeavoring to halt the Soviet troop offensive, not only stubbornly held on to defensive lines but also launched counterstrikes against the advancing troops. Often the objectives of these were tank armies fighting away from the main forces of the front with exposed flanks and extended (and sometimes broken) delivery and evacuation routes and not having a proper air cover. The enemy usually included in the counterstrike groupings three-five tank divisions numbering from 100 to 600 tanks and assault guns(1) as well as infantry formations and units. The Soviet tank armies, the formations of which in the previous offensive battles had suffered significant losses, by the start of repelling the enemy strikes had from 110 to 380 tanks and SAU [self-propelled artillery mount].(2) Enemy superiority in armored equipment made it possible for it to temporarily seize the initiative on individual sectors and forced the tank field forces to take up the defensive. Under such conditions, for example, on 1 August 1944, to the east of Warsaw (the Lublin-Brest Offensive Operation) the 2d Tank Army of the First Belorussian Front went over to the defensive.(3)

The tank armies went over to the defensive after meeting engagements which had gone unsuccessfully for them. This was the case, for example, on 14 August 1943, in the Belgorod-Kharkov Operation at Bogodukhov (1st Tank Army of the

Voronezh Front)(4) and on 11 November 1943 in the Kiev Operation to the south
Table 18

Certain Indicators of Tank Army Defensive

No.	Operations, Fronts	a	b	c	d	e
1	Belgorod-Kharkov, Voronezh	1 TA with 6 A; 14-17 Aug 43	180	to 20	8-10	1-ech
2	Belgorod-Kharkov, Voronezh	5 Gds. TA with 5 Gds. A; 14-17 Aug 43	110	to 20	10-12	"
3	Kiev, First Ukrainian	3 Gds. TA with L Rif. Corps; 11-14 Nov 43	150	30-40	8-12	1-2 ech
4	Korsun-Shevchenkovskiy, First Ukrainian	6 TA with XLVII Rif. Corps; 4-17 Feb 44	200-250	to 50	15-20	2-ech
5	Korsun-Shevchenkovskiy, Second Ukrainian	5 Gds. TA with XLIX Rif. Corps; 4-17 Feb 44	150	to 50	12-15	"
6	Lublin-Brest, First Belorussian	2 TA; 1-5 Aug 44	380	40-50	12-20	1-ech
7	Lwow-Sandomierz, First Ukrainian	3 Gds. TA with 13 Gds. A; 20-31 Aug 44	150-200	30-40	10-15	"
8	East Prussian, Second Belorussian	5 Gds. TA with XLII Rif. Corps; 24-30 Jan 45	160	to 40	to 20	"

* Table was prepared from data of TsAMO SSSR: folio 203, inv. 51360, file 60, sheet 210; folio 223, inv. 50, file 664, sheets 220-221; folio 315, inv. 4440, file 3, sheets 228-238; folio 236, inv. 13316, file 1, sheets 2, 73; folio 240, inv. 29595, file 1, sheet 77; folio 2336, inv. 356, file 20, sheets 204-219; folio 315, inv. 4440, file 146, sheets 88-89.

Key: a--Tank Armies, Length of Their Joint Defensive Actions With
Combined-Arms Field Forces (Formations)

b--Number of Tanks and SAU in Tank Army

c--Width of Defensive Zone, km

d--Depth of Defense, km

e--Operational Configuration

of Fastov (3d Guards Tank Army).(5) By the end of the designated meeting engagements the situation had become extremely complex. The battle formations of the tank armies were scattered along the front and in depth and cooperation was disrupted both within the tank field forces and often with adjacent units. Due to the extent of the rears, interruptions arose in the supply of troops with materiel. Under such conditions the tank armies took up the defensive in the same operational configuration and ordinarily in the same areas where the meeting engagements had occurred. The reinforcing of lines and areas was the chief means of going over to the defensive.

The experience of the Great Patriotic War showed that one of the most important tasks for the troops in offensive operations was to capture and hold bridgeheads on the main water lines. The combat operations of the First Ukrainian Front in the concluding stage of the Lwow-Sandomierz Operation (the Sandomierz area) was an example of a stubborn fight to widen and hold the bridgeheads. In repelling the counterattacks in the northern part of the Sandomierz bridgehead, of important significance was the going over of the 3d Guards Tank Army to the defensive precisely when the enemy was preparing to launch a strong blow against it and had concentrated three tank divisions and three infantry divisions for this.(6)

At times, chiefly for the conducting of offensive operations by the fronts to encircle large enemy groupings, the tank armies went over to the defensive ahead of time. Thus, in the course of the Korsun-Shevchenkovskiy Operation, the 6th Tank Army of the First Ukrainian Front and the 5th Guards Tank Army of the Second Ukrainian Front, after reaching the external perimeter of encirclement of the enemy grouping on 31 January 1944, were ordered to go over to the defensive by the front commanders.(7)

The defensive in the course of the offensive operations by a majority of the tank armies was organized in a limited time. Research on archival documents indicates that from 7-8 hours up to 24 hours were spent on this. Only the 6th Guards Army and the 6th Tank Army in the Korsun-Shevchenkovskiy Operation which were ordered to go over to the defensive ahead of time had about 3 days to organize this. The going over to the offensive occurred under difficult conditions, since during the period of reinforcing the achieved lines the tank armies simultaneously with carrying out measures of an organizational sort were forced to also carry out battle tasks: a portion of their forces conducted offensive battle while another repelled enemy attacks. In a short period of time it was essential to adopt a plan using a map, to promptly set the tasks for the troops, to regroup the men and weapons to the axis of the main enemy thrust, organize a fire plan and establish man-made obstacles.

The plan was adjusted in the field as the situation became clear, as additional information was received on the enemy, our own troops and adjacent units and issued to the units and formations. In the plan they gave the goal of going over to the defensive, the areas for the concentration of the army's main efforts, its operational configuration and defensive zones of the formations.

The commanders of the field forces designated the concentration areas of the main army forces proceeding from the enemy's actions and the ascertained axis of its main thrust. By maneuvering within the field forces and by reinforcing the tank armies with reserves of the fronts it was possible to create very high densities of troops and combat equipment on the main axes of the enemy offensive. Thus, while per kilometer of defensive front there was an average of 3-10 tanks and SAU, 7-15 guns and mortars and 0.3-0.9 of a rifle (motorized rifle) battalion, on the main axes there were 7-17.5 tanks and SAU, 9-30 guns and mortars and 0.5-1.3 of a rifle (motorized rifle) battalion.(8)

The questions of the operational configuration of the army troops and the establishing of defensive zones were resolved along with the massing of men and weapons.

In going over to the defensive, the tank armies were compelled to have usually a single-echelon configuration of battle formations. The operational configuration also included the general, antitank artillery and artillery reserves as well as a mobile obstacle construction detachment. When a tank field force was reinforced with antiaircraft artillery, antiaircraft artillery groups were incorporated in the operational configuration. A second echelon was established in the event the tank army was reinforced with rifle and artillery formations and units as well as with a possibility of conducting a regrouping of the troops (the 3d Guards Tank Army in the Kiev Operation and the 6th and 5th Guards Tank Armies in the Korsun-Shevchenkovskiy Operation). With a single-echelon operational configuration, usually only a main defensive zone was established. Its depth coincided with the depth of the battle orders of the formations and was 5-10 km. The positions of the army reserves with only one defensive zone were prepared to a depth of 10-12 km from the forward edge. Considering them the total depth of the defenses of tank armies reached 12-15 km.

With a two-echelon operational configuration, the edge of the second defensive zone was set along the line of the second echelon's position. This ran, as a rule, the same distance away from the forward edge as the positions of the army reserves, that is, 10-12 km. Its depth was 6-8 km. The total depth of the two-zone defensive, for example, in the Korsun-Shevchenkovskiy Operation reached 16 km (5th Guards Tank Army) up to 20 km (6th Tank Army).

The defensive was organized in such a manner as to ensure the strong holding of its main zone, to repel enemy strikes and to prevent the enemy from breaking through in depth.

Since the enemy launched strikes against the tank armies basically with the forces of tank groupings, their defenses were readied primarily as antitank ones.

Contributing to the greater strength of the defenses was the establishing of antitank areas between the defensive zones and these areas included antitank and self-propelled artillery as well as a portion of the artillery from the rifle formations. In addition, tank ambushes were organized and these were located on the forward edge, in the intervals between the company strongpoints and deep in the defenses; a portion of the tanks and SAU (primarily those with

an immobile undercarriage) was turned into fixed firing positions. Mixed minefields were also set out.

Table 2*

Density of Forces Established in Conducting Defensive by Tank Armies

No.	Operations, Fronts, Tank Armies and Combined-Arms Field Forces (Formations) Fighting Jointly With Them	Density of Forces Per km of Front	
		In Defensive Zones	In Concentration Areas of Main Forces
1	Belgorod-Kharkov, Voronezh, 1 TA with 6A	9-10 tanks, SAU; to 15 guns, mortars; 0.9 rif. (mot. rif.) btlm.	13 tanks, SAU; 20 guns, mortars; 1.3 rif. (mot. rif.) btlm.
2	Belgorod-Kharkov, Voronezh, 5 Gds. TA with 5 Gds. A	5-6 tanks, SAU; to 10 guns, mortars; 0.8 rif. (mot. rif.) btlm.	10 tanks, SAU; to 15 guns, mortars; 1 rif. (mot. rif.) btlm.
3	Kiev, First Ukrainian, 3 Gds. TA with L Rif. Corps	4-5 tanks, SAU; 6-7 guns, mortars; 0.6 rif. (mot. rif.) btlm.	7-8 tanks, SAU; to 12 guns, mortars; 0.8 rif. (mot. rif.) btlm.
4	Korsun-Shevchenkovskiy, First Ukrainian, 6 TA with XLVII Rif. Corps	5-6 tanks, SAU; 10-12 guns, mortars; 0.3 rif. (mot. rif.) btlm.	10-12 tanks, SAU; 25-30 guns, mortars; 0.9-1 rif. (mot. rif.) btlm.
5	Korsun-Shevchenkovskiy, Second Ukrainian, 5 Gds. TA with XLIX Rif. Corps	3 tanks, SAU; 11 guns, mortars; 0.3 rif. (mot. rif.) btlm.	8-10 tanks, SAU; 20 guns, mortars; 0.9-1 rif. (mot. rif.) btlm.
6	Lublin-Brest, First Belorussian, 2 TA	9-10 tanks, SAU; 7-8 guns, mortars; 0.4 of mot. rif. btlm.	17.5 tanks, SAU; 15 guns, mortars; 0.5-0.6 of mot. rif. btlm.
7	Lwow-Sandomierz, First Ukrainian, 3 Gds. TA with 13 Gds. A	3-4 tanks, SAU; 10 guns, mortars; 0.9 rif. (mot. rif.) btlm.	To 10 tanks, SAU; 15 guns, mortars; to 1.3 rif. (mot. rif.) btlm.
8	East Prussian, Second Belorussian, 5 Gds. TA with XLII Rif. Corps	4 tanks, SAU; 9 guns, mortars; 0.8 rif. (mot. rif.) btlm.	To 6-7 tanks, SAU; to 12 guns, mortars; 1 rif. (mot. rif.) btlm.

*Table compiled from data of TsAMO SSSR given in note to Table 1.

The successful execution of defensive tasks by the tank army formations depended largely upon the clarity and coordination of their actions. When little time was left for reconnaissance, cooperation was organized without a trip to the field. Instructions for cooperation were issued primarily in the interests of those formations which were to fight on the main sectors. In organizing cooperation, in the aim of eliminating a possible enemy drive into our defenses, the commanders of the armies and corps gave chief attention to the maneuvering of men and weapons. For this it was planned to initially move up the brigade reserves and then the corps reserves to the sector of a possible enemy incursion. The army reserves were to be employed in the fighting for the main defensive zone.

If the situation permitted, cooperation was organized in the field. Thus, during the period of conducting the Korsun-Shevchenkovskiy Operation, the commander of the 6th Tank Army on 1 February 1944 in the course of reconnaissance adjusted the tasks for the formations and set out the procedure for their actions with the advance of the enemy to the forward defensive edge, in the course of the fighting for the main zone and eliminating the incursion of the enemy groupings.(9) In a similar manner the adopted plan was adjusted by the commander of the 5th Guards Tank Army in this same operation.(10)

It should be pointed out that the stability of the tank army defenses also depended upon coordinated actions between the tank and mechanized corps and the attached rifle field forces. Cooperation between them was organized in accord with a plan worked out by the tank army staff on the basis of the decisions of the field force commander. This document, as is shown by the experience of the 5th Guards Tank Army and 6th Tank Army, dealt with the questions of the reinforcing of the rifle formations with the tank (mechanized) brigades and SAU regiments, it set out the procedure for their joint actions in the main defensive zone, it indicated the particular features of employing the rifle formations assigned to cover the tank ambushes, and established the signals for the start and breaking off of the tank (SAU) fire and reciprocal warning signals.

Particularly great attention was given to the organizing of cooperation between the tank army corps and the rifle formations in preparing and carrying out the counterstrike by the second echelon and reserve forces. The rifle troops were given the task of holding the occupied lines by a stubborn defense and of preventing the moving up of the Nazis to the flanks. The enemy which had wedged in was to be cut off and destroyed basically by the tank (mechanized) formations of the second echelon and reserve as well as by the rifle units and subunits which had retreated from the main area back into the defenses. For this reason, when the situation permitted, the commanders of the cooperating formations in the field designated the best axis for the counterstrike and clarified the methods of action of the infantry and the tanks.(11)

The successful combating of the enemy assault groupings depended largely upon dependable cooperation between the tank army and supporting aviation and this was planned and organized on the basis of the decision and instructions of the

front commander as well as the tasks set by the tank army commander, the staffs of the tank field force and air army. All questions of air support for the defensive actions of a tank field force were carefully coordinated and clarified with the commanders and staffs of the air formations cooperating with the tank army.

For achieving clear and effective cooperation, at the command (observation) post of the tank army there was an operations group headed by the commander of the air corps (division) and he was the senior air representative in the tank field force. Thus, the commander of the I Ground Attack Air Corps was at the command post of the 5th Guards Tank Army in the Korsun-Shevchenkovskiy Operation.(12) On the Sandomierz bridgehead (Lwow-Sandomierz Operation), for the closer cooperation of the formations from the 2d Air Army with the ground troops, its operations group was located at the joint observation post of the commanders of the 13th Army and the 3d Guards Tank Army.(13)

With the going over of the enemy to the offensive, basic attention was given to defeating it on the approaches to the forward edge by weapons positioned in the main defensive zone. This task was carried out most effectively in those tank armies where reconnaissance was carefully organized and fire prepared on the approaches to the defenses. For example, the command of the 5th Guards Tank Army (Belgorod-Kharkov Operation) even before the start of the fighting established that the main forces of the SS Tank Division Reich were concentrated 2 km from the forward edge and were ready to launch an attack.(14) On 14 August 1943, as was assumed, the enemy began the offensive in the morning. With the approach of the enemy tanks and infantry to the forward edge, the artillery from covered firing positions opened up with barrage fire against previously designated lines. As the enemy approached the forward edge of the defenses, the tanks, SAU and antitank artillery joined battle against it. Having put up stubborn resistance against the units of the SS Tank Division Reich, the army's first-echelon formations forced the enemy to abandon its further offensive.(15)

The successful outcome of the clash with the enemy depended largely upon the ability of all levels of commanders to combat large enemy tank groups. An example of this would be the unique employment of weapons in repelling tank assaults ahead of the forward defensive edge of the 3d Guards Tank Army in the Kiev Operation. Even before going over to the defensive it had been established that heavy tanks were in the first echelon of the enemy tank groupings, medium and light tanks in the second and motorized infantry in the third. The task of the enemy heavy tanks included the neutralizing of our antitank weapons. The medium and light tanks and the motorized infantry were to breach the battle formations of the defending troops and continue the offensive in depth. Since such a method of employing combat vehicles had repeatedly brought the enemy success, it was essential to disrupt cooperation between its tank echelons and halt their advance. For this purpose the heavy tanks were hit first by the fire of the SAU and antitank artillery. With the shortening of the distance between the enemy and the forward edge to 700-800 m, fire was opened up simultaneously against all three echelons. The SAU

hit the enemy heavy tanks, the tanks (T-34), the antitank artillery and the rocket artillery battalions (M-8, M-13) hit the medium and light tanks while the mortars fired at the infantry mounted on armored personnel carriers.(16) Such a method of repelling advancing enemy troops produced good results.

Beginning with 1944, due to the high losses in heavy tanks, the Nazi Command altered the procedure for their employment. In the Korsun-Shevchenkovskiy, Lublin-Brest and Lwow-Sandomierz Operations, in preparing the tank assaults, the Nazi Command put not the heavy tanks in the first echelon but rather a small group of light and medium combat vehicles which attacked on a broad front. Their task was to draw the fire of the antitank weapons. As soon as the light and medium tanks approached the forward edge of the defenses, the heavy tanks engaged our antitank weapons in a fire fight, firing from a range of up to 1.5-2 km at the detected antitank weapons. After neutralizing the antitank defenses, the main forces of the tank grouping (medium and heavy tanks) went over to the assault.

The Soviet Command, having discovered this enemy tactics, opposed it with its own method of action. For example, in defending the Sandomierz bridgehead, upon instructions of the Commander of the 3d Guards Tank Army, Col Gen Tank Trps P.S. Rybalko, the "scout" tanks were fired upon by on-call antitank weapons which were specially assigned to hit them. With the going over of the enemy main forces to the offensive, long-range artillery made fire strikes against enemy tanks and motorized infantry. When the attacking enemy entered the range of effective fire from the other antitank weapons, the enemy tanks were engaged by the SAU, tanks and antitank artillery positioned in antitank strongpoints. Fire from antitank rifles was conducted against them immediately before the main defensive zone.

The maneuvering of men and weapons was widely employed by the tank armies in the course of combating the enemy in the main defensive zone and in eliminating an incursion of enemy troops. The aims of the maneuvering varied and depended upon the existing conditions. As a rule, the tank, artillery and motorized rifle units and formations maneuvered in the aim of stiffening the resistance to the enemy on the breakthrough sectors of enemy troops, for reinforcing the first-echelon formations on the defensive and for concentrating men and weapons to carry out counterstrikes.

In the course of the defensive engagements by the tank armies in 1943, men and weapons were maneuvered chiefly by moving up the tank reserves of the armies and corps from in depth. In approaching the areas of an enemy incursion, they took up the defensive and repelled the enemy assaults by firing from a halt.

The maneuver played a very substantial role in stiffening the resistance shown to the enemy. Moreover, in repelling strikes by groupings which had broken through and in causing them harm, the activeness of enemy offensive actions declined (3d Guards Tank Army in the Kiev Operation) and in certain instances (the 5th Guards Tank Army in the Belgorod-Kharkov Operation) it completely broke off the offensive.

Maneuvering of men and weapons was carried out significantly more widely in the defensive battles of the tank armies in the concluding stage of front offensive operations in 1944-1945 and this was aided by the experience gained

in combating the enemy counterstrike groupings. All of this permitted the commanders of the tank armies to mass men and weapons more decisively not only by the extensive maneuvering of all types of reserves but also by drawing on the subunits, units and even formations removed from unattacked sectors and secondary areas. In addition, the reinforcing of the tank armies with front reserves helped to increase the number of men and weapons on the main sectors.

The high activity of the tank army defensive was manifested in the launching of counterstrikes against wedged-in enemy groupings not only during the day but sometimes at night (3d Guards Tank Army in the Lwow-Sandomierz Operation). In the course of the commenced defensive engagements, counterstrikes were readied, as a rule, in a short period of time. Their organization required great efficiency and creativity in the work of the army commanders and their staffs. The decision to conduct counterstrikes was taken by the army commanders during the first or second day of the defensive engagement, before the enemy had succeeded in widening the wedge along the front and in depth and the offensive of its grouping had been held up in the course of the fighting for the main defensive zone.

Involved in the launching of counterstrikes were the general reserves and the formations of the first echelon as well as the second echelon (if created) of the tank armies and formations removed from unattacked areas and secondary zones. Usually the counterstrikes were launched after brief but powerful shelling by the artillery on the move (2d Tank Army in the Lublin-Brest Operation, 3d Guards Tank Army in the Lwow-Sandomierz Operation) or after the brief taking up of the initial position (6th Tank Army in the Korsun-Shevchenkovskiy Operation).

Usually as a result of the defensive engagements by the tank armies, the enemy troops abandoned the offensive on the previously chosen axes or went over to the defensive.

* * *

Thus, the experience of the Great Patriotic War showed that the tank armies which played the main role in developing a tactical breakthrough into an operational one, in the course of the offensive also successfully carried out defensive tasks. The methods employed by them in organizing and conducting the defensive have largely kept their importance under present-day conditions. As before, for the tank formations and units, still pertinent are such questions as: choosing the moment to go over from the offensive to the defensive and its rapid preparation under the conditions of direct contact with the enemy, the prompt adopting of a plan and the issuing of tasks to the troops, the regrouping of men and weapons and their massing on the axis of the enemy's main thrust, and the establishing of an effective fire plan for the artillery, tanks and SAU and a system of man-made obstacles.

Also of practical interest is the organization and execution of counterstrikes against an enemy which has broken in.

The creative employment of the experience of organizing and conducting the defensive by tank armies in the course of front offensive operations will help to increase the combat readiness of the Ground Troops today.

FOOTNOTES

1. Calculated from data of the TsAMO SSSR [Central Archives of the USSR Ministry of Defense]: folio 299, inv. 37805, file 4, sheet 7; folio 299, inv. 21015, file 1, sheet 17; folio 299, inv. 17253, file 10, sheets 72-75; folio 315, inv. 4442, file 40, sheets 1-39; folio 240, inv. 50184, file 10, sheets 175-178; folio 307, inv. 148, file 40, sheets 175-178; folio 307, inv. 4148, file 196, sheets 46-47; folio 315, inv. 4440, file 289, sheets 42-80.
2. See Table 1.
3. TsAMO, folio 307, inv. 4148, file 196, sheets 46-47.
4. Ibid., folio 300, inv. 7498, file 3, sheet 93.
5. Ibid., folio 315, inv. 4440, file 4, sheet 107.
6. Ibid., file 341, sheets 5-57.
7. Ibid., folio 236, inv. 13428, file 7, sheets 132-135; folio 240, sheets 132-135; folio 240, inv. 25789, file 16, sheets 278-281.
8. See Table 2.
9. TsAMO, folio 236, inv. 360916, file 1, sheet 20.
10. Ibid., folio 332, inv. 4948, file 154, sheets 4-30.
11. Ibid., folio 240, inv. 15789, file 16, sheets 278-281.
12. Ibid., folio 315, inv. 4999, file 82, sheets 41-42.
13. Ibid., folio 236, inv. 366916, file 1, sheet 20.
14. Ibid., folio 223, inv. 50664, file 9, sheet 180.
15. Ibid., folio 328, inv. 4854, file 11, sheets 22-23.
16. Ibid., folio 315, inv. 4440, file 330, sheet 45.

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AIR DEFENSE OF LINES OF COMMUNICATIONS DURING GREAT PATRIOTIC WAR

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[Article by Col (Res) R.I. Pigasov: "Air Defense Lines of Communications During the Great Patriotic War"]

[Text] During the years of the Great Patriotic War, great attention was given to air defense of the lines of communications (particularly rail and water) which were employed to move troops, as well as deliver weapons and military equipment, ammunition, fuel, food and other materiel. The enemy endeavored to paralyze the operational movements by every means. About 25 percent of the total number of aircraft overflights counted in the zones of responsibility of the field forces and formations of the National Air Defense Troops during the war years was made by Nazi aviation in the aim of attacking objectives of the front lines of communications.(1) For this reason the cover for the rail junctions and stations, the railroads and highways, bridges, crossings, waterways and ports, troop trains and ship convoys en route was one of the main tasks of the National Air Defense Troop.

The railroads played a particular role in supporting the requirements of the troops. They made up for over 70 percent of the movements of military cargo and personnel on the continent (the total volume exceeded 19 million carloads). Nazi aviation made around 20,000 raids against the rail lines of our nation, dropping more than 250,000 various bombs in this.(2)

By the start of the war, all the main railroad junctions, stations and bridges a distance of up to 500-600 km from the western frontier were covered by air defense weapons. Major junctions (Velikiye Luki, Vitebsk, Smolensk, Gomel, Baranovichi, Grodno, Shepetovka and so forth) were covered by antiaircraft artillery regiments. Air defense for stations and bridges was provided by separate antiaircraft artillery battalions armed with medium-caliber weapons (SZA) and small-caliber weapons (MZA), antiaircraft machine guns and searchlights.

Encountering heavy resistance during the first days of the war from the air defense weapons around the railroad junctions, stations and bridges, the enemy began to attack undefended small stations, sidings as well as troop trains en route. For protecting such installations, they began organizing special

maneuvering groups which included SZA and MZA batteries as well as antiaircraft machine gun subunits. The groups usually operated from an ambush and this was a new form in the combat employment of antiaircraft weapons.

The antiaircraft armored trains played an essential role in covering railroad facilities. As a total during the war years there were around 200 of them. The armored trains were armed with three 76-mm caliber guns, two 37-mm cannons and three large-caliber antiaircraft machine guns.(3) For protecting the trains, antiaircraft artillery escort groups were also established. Each of these was located on a separate flatcar (gondola) and possessed, as a rule, a small-caliber gun and an antiaircraft machine gun. The flatcars were incorporated in the railroad consist at three places (at the head, in the middle and at the tail).

Fighter aviation also participated in carrying out the task of air defense for the lines of communications. For example, the cover for the Kirov Railroad was provided by units from the Murmansk Air Defense Divisional Region and the 122d Air Defense Fighter Division attached to it. After the collapse of the plans to seize Murmansk and the Kirov Railroad, the Nazi Command attempted, in employing aviation, to disrupt the normal operation of the main line. Here as the main objective of its actions, the enemy chose the Loukhi--Kandalaksha sector some 164 km long. For strengthening the cover of the railroad sector, the region's command quickly shifted here seven SZA and MZA batteries and three platoons of antiaircraft machine guns to supplement the existing two MZA batteries and the antiaircraft machine gun company. A portion of the forces was employed for air defense of the stations and sidings of Knyazhnaya, Kovda, Polyarnyy Krug and others, and a portion was incorporated as part of the maneuvering groups. In addition, five groups were established for escorting trains en route, and each of these groups was armed with several MZA guns and two or three large-caliber antiaircraft machine guns. The aviation subunits operated using several methods: "airfield alert," continuous patrolling in designated areas as well as patrolling during the assumed time that enemy bombers would appear.

The adopted measures produced positive results. During 1943, units of the Murmansk Air Defense Divisional Region and the 122d Air Defense Fighter Division destroyed 139 aircraft and hit 30.(4) The air defense groups participated in the cover of 882 trains, of which only 18 sustained insignificant damage. In repelling the air strikes, the antiaircraft gunners downed 30 aircraft and hit 14.(5) The attempt by the enemy to put the Kirov Railroad out of operation failed.

In organizing air defense for the front lines of communication on the Kursk Salient, the experience of the first period of the war was considered. Hq SHC entrusted the carrying out of the task to units of the Ryazhsk--Tambov, Voronezh--Borisoglebsk, Kharkov and Tula Air Defense Divisional Regions and to the 36th, 101st, 125th and 310th Air Defense Fighter Divisions which were subordinate to them. The involvement of such an amount of air defense weapons was caused by the complexity of the situation, by the make-up of the opposing Nazi air grouping and by its high activity. The Nazis had up to 1,100 aircraft, including 900 bombers, at just the Smolensk, Orel and Kharkov airfield centers.(6)

The air defense system of the Kursk Salient was marked by a number of features which were caused by the presence of a large number of railroad installations and their proximity to the front line. For this reason, operational groups were established for rigidly centralizing control over the air defense formations and units in the individual regions. For example, the Kursk Air Defense Operational Group (chief, Col V.S. Gavrilov) included antiaircraft units of the National Air Defense Troops defending Kursk and installations on the Kastornaya--Kursk railroad section as well as three regiments of the 101st Air Defense Fighter Division under the command of the division's chief of staff, Col N.I. Slashchuk. A particular feature of the organization was that the men and weapons from this group operated in a single zone with the antiaircraft and fighter units of two fronts, the Central and Voronezh.

The joint efforts of the organic air defenses, the fighter aviation of the fronts and the units of the operational group made it possible to combat the enemy bombers over their entire flight to the objectives. The principle of allocating combat zones was used as the basis of cooperation between the fighter aviation of the fronts and the air defense fighter aviation. The front fighters, in being based at forward airfields, met the enemy aircraft at the distant approaches. Later the subunits of fighter aviation from the air defense operational group joined combat. The antiaircraft artillery operated directly in the areas of the covered objectives. The entry of the fighters into the zone of antiaircraft fire was prohibited, with the exception of instances of completing an attack. Cooperation of the fighter aviation with antiaircraft artillery was carried out according to a previously elaborated planning table the data of which were issued to all pilots and antiaircraft subunit commanders.

A new feature in the employment of fighter aviation was the assigning of certain railroad sectors to aviation regiments. Fighters patrolled continuously over objectives close to the front line. With the appearance of Nazi aircraft, duty subunits also scrambled from nearby airfields. They were guided by radar to the air targets.

The staff of the air defense operational group maintained close contact with the chiefs of the rear services and the sections of military railroads [VOSO] of the fronts. As a result, the command of the operational group had constant information concerning the movement of the trains and this made it possible to promptly organize their cover.

Due to such an organization, the National Air Defense Troops in cooperation with the fighter aviation and antiaircraft artillery of the fronts, thwarted the plans of the Nazi Command to put the railroads on the Kursk sector out of operation. Enemy aviation was unable to disrupt the operational regroupings and supply of the fronts. By the start of the Nazi offensive, over 468,000 railway cars had been delivered to the area of the Kursk Salient. The total volume of shipments in the Kursk Operation was around 540,000 carloads and this greatly surpassed the volume of shipments in the course of the engagements at Moscow and Stalingrad.(7)

The amount of forces from the National Air Defense Troops involved in covering the frontline lines of communications increased continuously in the course of the war. Thus, on 1 October 1944, the carrying out of this task involved 34 percent of the fighter aviation, over 32 percent of the medium antiaircraft artillery and over 54 percent of the small-caliber. In comparison with the start of 1942, the number of SZA rose by 5-fold, the MZA by 22-fold, the large-caliber antiaircraft machine guns by 16-fold and searchlights by 18-fold.(8)

During the first period of the war, the Ladoga water (in the winter, ice) link assumed particular importance and over this ships and vessels from the Ladoga Naval Flotilla and its subordinate Northwestern River Navigation Company delivered troops and diverse cargo to besieged Leningrad and on the return trips evacuated people. With the start of the shipments, enemy aviation began to oppose the movements and each day the strength of the attacks grew. For defending the Ladoga sea link against air attacks, in September 1941, a brigade (from August 1942, divisional) air defense region was established and this included antiaircraft artillery, machine gun and other units and subunits. Fighter subunits were assigned from the VII Air Defense Fighter Corps (the Leningrad Air Defense), the Air Forces of the Leningrad Front and the Red Banner Baltic Fleet, and the chief mission of these fighters was to repel enemy raids on the Ladoga route. Air defense weapons mounted on ships of the Ladoga Naval Flotilla also participated in combating aviation. For protecting the Lifeline in the winter, the MZA and the antiaircraft machine guns were mounted along the route directly on the ice. Regardless of their small number, they rather effectively resisted the enemy bombers and prevented accurate bombing as 85 percent of the dropped bombs fell away from the road. Transport losses were insignificant.

Air defense of the Ladoga water link was a component part in the defensive system of the besieged city (this was a particular feature of it). For this reason all the air defense forces were under the commander of the Leningrad Front. Here the National Air Defense Troops for the first time had to defend a strategic transport artery in close cooperation with the air defense forces of a front, a fleet and a flotilla.(9)

The prompt and precise organization of air defense for the Ladoga water link made it possible to continuously supply the blockaded city with food products, fuel, military equipment and ammunition. Over the first navigation season (September-November 1941), Leningrad received 60,000 tons of cargo and more than 38,000 persons were evacuated from it.(10) During the winter of 1941-1942, over 360,000 tons of cargo were shipped into the city. Over the 194 days of the 1942 summer navigation season more than 1 million tons of cargo and over 1 million persons (including 250,000 who replaced the troops of the front and the fleet) were delivered to Leningrad and back to Soviet-held territory.(11)

In the second half of 1942, the air defenses of the Volga Waterway assumed major importance. After the enemy had seized the southern railroad, the supply of the Stalingrad Soviet troop grouping and the transporting of oil products from the Caucasus to the central regions of the nation began to be carried out over the Volga. In line with this the Nazi Command gave its

aviation the mission of paralyzing Soviet ship traffic in the lower courses of the river, to stop shipments and supply of the fronts on the defensive and thereby ensure success for its troops pushing toward Stalingrad and the Volga. It concentrated more than 1,200 aircraft, including 780 bombers, on the Stalingrad sector.(12)

Hq SHC entrusted air defenses of the Volga Waterway to units of the Stalingrad Corps Air Defense Region, the Saratov and Astrakhan Divisional Air Defense Regions. For providing a cover for ship convoys and individual steamships, a special operations group was organized of floating air defense weapons (a total of around 300 MZA and machine guns).

Each convoy, in addition, was escorted by two or three launches from the Volga Naval Flotilla and each vessel carried 2-6 antiaircraft guns and 3-6 machine guns. The adopted measures reduced the effectiveness of the enemy air raids.

Air defense of the Volga Waterway was carried out within the overall strategic task being realized by the Soviet Command on the Stalingrad sector. In line with this particular feature, the Stalingrad Corps Air Defense Region and the Volga Naval Flotilla in operational terms were put subordinate to the commander of the Stalingrad Front. Their effective use made it possible to securely cover the movements and ensure the continuous resupply of the defending troops with personnel and everything necessary. For example, just during the period from 1 through 20 November 1942, more than 160,000 soldiers and officers, 430 tanks, 600 guns, 14,000 motor vehicles, 6,700 tons of ammunition, around 4,000 tons of food and several thousand tons of other freight were moved across the Volga over ferry crossings and bridges.(13) The Volga Naval Flotilla over September-November delivered to Stalingrad some 65,000 soldiers, 2,500 tons of various cargo and evacuated more than 30,000 wounded and tens of thousands of the civilian population.(14)

During the war years serious attention was given to defending the northern sealanes over which strategic raw materials, weapons and food were delivered to the nation by the Allies in the anti-Nazi coalition. In the aim of preventing the shipments, the Nazi Command concentrated a large number of submarines, surface vessels and aircraft at bases and airfields in Northern Norway. Such basing permitted enemy aviation to attack ships and transports along their entire route.

All available forces of ships and aviation from the Northern Fleet participated in defending the Allied convoys. Moreover, during a period of intensive convoy traffic, the carrying out of this mission also involved air force units (from November 1942, the 7th Air Army) from the Karelian Front and the 122d and 104th Air Defense Fighter Divisions attached, respectively, to the Murmansk and Arkhangelsk Divisional Air Defense Regions. Here the air formations and units from the various Armed Services in operational terms were subordinate to the commander of the Northern Fleet Air Forces. For realizing their cooperation with the ground air defenses, a single plan was drawn up and joint command posts organized.

The dependable cover of the waterways against enemy air strikes made it possible for the maritime and river transport to carry during the war years

more than 4.3 million officers and soldiers, 10,600 guns, 4,600 tanks, 48,900 motor vehicles and over 22 million tons of cargo.(15) The river flotilla forces transported around 2.5 million men.

Among the tasks carried out by the National Air Defense Troops an important place was held by air defenses of crossings. This was particularly characteristic for the third period of the war, when the Soviet Army was conducting major offensive operations. During the period of the crossing of water obstacles by the troops and the capturing of bridgeheads, air defenses for the crossings were provided, as a rule, by the organic air defense. With the going over of the troops to the offensive, units and formations of the National Air Defense Troops began to be involved in carrying out this mission, being withdrawn from covering objectives beyond the range of enemy aviation. Here the amount of involved weapons varied. For example, the crossings over the Dnieper in the Kiev area in the autumn of 1943 were covered by 150 fighters, over 350 antiaircraft guns, 72 antiaircraft machine guns and other air defenses.(16) In April, 1945, for protecting the crossings over the Oder, just in the zone of the First Belorussian Front, some 530 antiaircraft guns and 237 antiaircraft machine guns from the V Air Defense Corps and 120 aircraft from the 148th Fighter Air Defense Division were assigned.(17)

In launching attacks, the Nazi aviation most frequently employed the tactics of massed raids from different directions. The attacks were carried out from low and medium altitudes coming in at angles of 45-50 degrees to the longitudinal axis of the crossing. For this reason the antiaircraft artillery grouping was positioned so as to conduct an all-round defense. In protecting several crossings located a short distance apart, the plan of antiaircraft artillery fire was a general one. It envisaged the setting of heavy curtains of barrage fire, and firing at divebombers and low-altitude airborne targets. Groups of air defense fighters patrolled in the set zones and when prompt warning was provided, intercepted enemy aircraft from an "airfield alert" status.

Hq SHC was the organizer of the cover for all frontline lines of communications. It opposed the massed Nazi air raids by massing the forces of the National Air Defense Troops which carried out the missions assigned to them in close cooperation with the fighter aviation and antiaircraft artillery of the fronts, fleets and flotillas. The establishing of large air defense groupings ensured normal operation of key transport objectives. The principle of allocating zones between the antiaircraft artillery and fighter aviation underlay the cooperation of the air defense forces. The assigning of railroad and subsequently water sections (zones) to the fighter aviation units was new in the tactics of their employment.

The maneuvering antiaircraft artillery groups and the train escort groups fought effectively. However, control over the latter was difficult. In line with this, at the start of 1944, all the separate subunits assigned to escort trains were put completely under the VOSO bodies of the Soviet Army. In organizational terms they were first put into regiments and separate battalions. On 1 March 1944, under the VOSO bodies were 10 regiments having 40 platoons each and 12 separate battalions with 20 platoons each. Air defense sections were established for directing them as part of the

headquarters of the VOSO chiefs of the fronts. Such a reorganization improved the command and employment of the platoons for covering the trains.

In the course of the war, air defenses for the lines of communications were organized according to a single plan which clearly set out the procedure of action for each branch of troops, formation and unit. Depending upon the situation, the air defense forces of the fronts, fleets and flotillas were put subordinate to the air defense command (Ladoga, Murmansk and so forth) or to the commander of the fronts (Leningrad, Stalingrad). This made it possible to employ them more effectively. The continuity and flexibility of command over the diverse air defense forces were maintained by the operational groups. Coordination of the latter with the VOSO bodies of the fronts made it possible to prevent the destruction by enemy aviation of much valuable freight, railroad rolling stock, vessels and other water crossing equipment.

The experience of air defenses for the lines of communications during the years of the Great Patriotic War has not lost its importance at present. It is the basis for the further development of the operational art and tactics of the Air Defense Troops. A thorough study and creative employment of this in the practical work of the commanders and staffs help in effectively carrying out the tasks of improving air defense.

FOOTNOTES

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 72, inv. 12275, file 575, sheet 2.
2. "Tyl Sovetskoy Armii" [Soviet Army Rear], Moscow, Voyenizdat, 1968, pp 273, 274.
3. VOYENNO-ISTORICHESKIY ZHURNAL, No 4, 1979, p 31.
4. TsAMO, folio 741, inv. 708614, file 1, sheet 219.
5. Ibid., folio 211, inv. 35233, file 8, sheets 167-180.
6. Ibid., folio 7, korp. PVO, inv. 708619, file 1, sheet 52.
7. "Istoriya Velikoy Otechestvennoy voyny Sovetskogo Soyuza 1941-1945" [History of the Great Patriotic War of the Soviet Union of 1941-1945], Moscow, Voyenizdat, Vol 3, 1964, p 196.
8. "Voyennoye iskusstvo vo vtoroy mirovoy voyno (strategiya i operativnoye iskusstvo)" [Military Art in World War II (Strategy and Operational Art)], Moscow, Voyenizdat, 1973, pp 509, 510.
9. The length of the water route across Lake Ladoga from the Ports of Novaya Ladoga (major route) and Kobona (minor route) to the Port of Osipovets was, respectively, 135 and 35 km. The ice route from Kobona to Kokarev and Vaganov was around 30 km long ("Sovetskaya Vojennaya Entsiklopediya" [Soviet Military Encyclopedia], Moscow, Voyenizdat, Vol 3, 1977, p 249).

10. VOYENNO-ISTORICHESKIY ZHURNAL, No 1, 1973, p 82.
11. "Istoriya Velikoy Otechestvennoy...", Vol 2, 1963, p 473.
12. TsAMO, folio 9, inv. 708621, file 1, sheet 11.
13. Ibid., folio 220, inv. 496, file 16, sheet 9.
14. "Istoriya Velikoy Otechestvennoy...", Vol 3, p 22.
15. "Tyl Sovetskoy Armii," p 277.
16. TsAMO, folio 231, inv. 210367, file 20, sheet 21.
17. Ibid., folio 211, inv. 35234, file 69, sheet 39.

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FUEL SUPPLY FOR FRONTS IN THIRD PERIOD OF GREAT PATRIOTIC WAR

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[Article by Lt Gen I.N. Bazanov: "Fuel Supply for Fronts in the Third Period of the Great Patriotic War"]

[Text] During the third period of the Great Patriotic War, the Fuel Supply Directorate (USG) of the Soviet Army gained rich experience in organizing the supply fuel to the troops in major strategic offensive operations. The characteristic traits of these operations were: the growing technical equipping of our troops, the high rate of advance of the formations and units, particularly the tank and mechanized, the significant distance of the troops from the front supply bases and the front rear services from the supply bases in the interior of the nation, the shortening of the length of the operational pauses between the front operations and the conducting of active continuous combat operations by the Soviet troops on a strategic scale. All of this had direct bearing on the work of the fuel service.

First of all, there was an increased bulk (volume) of fuel consumed on the front. Thus, in the Berlin Operation, the three front (First and Second Belorussian and First Ukrainian) as an average consumed 8,800 tons of fuel a day, that is, approximately 2,933 tons per front, while during the counteroffensive at Stalingrad the average daily fuel consumption of the three fronts (Southwestern, Don and Stalingrad) during the period from 19 through 30 November was just 1,058 tons or an average of 353 tons per front.(1) Thus, the average daily fuel consumption calculated per hypothetical front over a period of 2 1/2 years rose by more than 8-fold. As a whole fuel consumption rose on all actively operating fronts.

As the Soviet troops moved west, the fuel supply for them in each new operation became greater in terms of the bulk (volume) of the fuel as well as in terms of the distance shipped and often went beyond the capabilities of the USG, becoming a problem of strategic leadership. Instructive from the viewpoint of supplying the fronts with fuel is the experience of the Belorussian Offensive Operation.

In preparing for the operation the State Defense Committee [GKO] ordered the People's Commissariat of Defense [NKO] by 1 June 1944 to establish in the

First, Second and Third Belorussian Front fuel supplies amounting to 20 fuel loads of aviation gasoline, 15 loads of tank fuel (KB-70 gasoline and diesel fuel) and 10 loads of gasoline. Subsequently there were plans to establish the following supplies in the First Baltic Front: 6,900 tons of aviation gasoline, 10,900 tons of motor vehicle gasoline and 2,900 tons of diesel fuel.(2) By a GKO decree, the designated fronts received from the mobilization reserve some 71,000 tons of fuel and from the state reserves, 19,500 tons. By reducing the May allocations for the national economy, the NKO was able to provide another 11,500 tons of fuel. Moreover, the First, Second and Third Belorussian Fronts and the First Baltic Front received directly from the industrial enterprises some 57,200 tons of fuel from the NKO allocations.(3)

The fuel supplies established by the GKO on the Belorussian fronts were organized by 1 June, and in the First Baltic Front by 22 June 1944. But since weapons and equipment were being delivered to the fronts continuously, the weight of the fuel load set in the calculations by the start of the operation had increased by 27 percent for the high-octane aviation gasoline, by 40 percent for the motor vehicle gasoline and by 22 percent for the diesel fuel. Naturally, the fuel supply situation on the fronts as measured in fuel loads deteriorated. Moreover, a portion of the fuel assigned to establish supplies was consumed by the fronts in preparing for the operation. As a result of this the set supply standard (in fuel loads) could not be made up(4) (see the table).

Fuel Supply Situation for Fronts at Start of Operation
(in fuel loads)

Front	Aviation Gasoline	Motor Vehicle Gasoline	Diesel Fuel
First Belorussian	4.0	4.1	7.1
Second Belorussian	10.4	2.5	6.4
Third Belorussian	6.2	3.4	6.3
First Baltic	9.2	4.1	7.6

From the table it can be seen that the fronts had: an average of almost 40 percent of the established level of high-octane gasoline, approximately 35 percent for the motor vehicle gasoline and around 50 percent for the diesel fuel. Thus, the delivery of motor vehicle gasoline caused particular concern. It must be considered that during this period one load of motor vehicle gasoline provided a run of the motor transport of just 150 km and this meant that in having three fuel loads in reserve, a motor vehicle could travel not more than 150 km. If it is also considered that a majority of the motor vehicles hauled materiel, that is, made two trips there and back, their capability was even lower.

For fuel storage they used not only the mobile tanks of the front and army field dumps and the containers of the troops, but also rebuilt permanent tanks of the district fuel dumps and local oil depots. Due to the serious

organizational work of the rear services of the fronts on the First Belorussian Front, for example, they repaired the tanks of five permanent dumps with a capacity of 12,600 tons of fuel, while the Third Belorussian Front rebuilt the tanks of three oil depots and dumps for 6,100 tons of fuel.(5)

The fuel supplies on the fronts were established chiefly by delivery from the interior of the nation as well as by the strictest economy in fuel consumption on the spot. Even on 5 September 1943, the GKO adopted a decree in which the commanders of the fronts and armies were ordered to plan the employment of equipment and weapons in the operations in precise accord with the established fuel consumption limits. In line with this an extensive campaign to save fuel commenced in the troops. The greatest effect was achieved where the commanders organized the correct operation of the motor vehicle fleet in delivering materiel. For example, it was prohibited without special permission to take motor transport beyond the rear limits of the fronts and armies. The introduction of a rigid motor vehicle hitch (towing) became widespread. An average of up to 50 percent of all the transport trucks and for certain fronts over 70 percent of the vehicles employed for mass shipments were operated in precisely this manner. Due to this on the Second Belorussian Front this saved, for example, 247 tons of gasoline. In the struggle to save and economize on fuel and lubricants an important role was played by the front and army conferences of specialists from different services: motor vehicles, road and fuel supply. Here the best specialist soldiers and drivers shared their experience in saving fuel under diverse weather conditions and on obstructed sectors of roads.

In the course of the operation, the demand for fuel in line with the increased length of transporting increased constantly and its delivery to the fuel by rail transport did not cover consumption. For this reason the Staff of the Soviet Army Rear Services and the USG adopted a number of emergency measures to dispatch fuel to the fronts by the motor transport of the center. For example, at the end of July, the Third Belorussian Front was sent four motor vehicle battalions with fuel. The USG dumps prepared to dispatch 1,075 tons of fuel in barrels. When the tank and mechanized corps reached deep into the enemy rear, it was impossible to supply them with fuel by motor transport. For this reason they began to employ the LI-2 and PO-2 air transports for this. Fuel was delivered in parachute-dropped barrels (PDB-100), and with the landing of the aircraft, in regular barrels. On the Third Belorussian Front, for example, aircraft supplied the forward units with 380 tons of different types of fuel, and on the First Belorussian Front 608 tons of different fuel.(6)

The problem of fuel delivery was particularly aggravated during the period of the concluding operations of the Great Patriotic War. As the Soviet troops advanced to the west, the transport distance increased and, consequently, the turnaround time of the tank cars between the oil refineries and the Volga transloading depots, where the fuel was delivered from Baku, and the railheads of the fronts. The situation was also exacerbated by the delayed return to the rear of tank rolling stock which was frequently employed on the fronts as mobile fuel dumps. The chief of the rear services of the First Belorussian Front, Lt Gen N.A. Antipenko, thus explained the hold-up of the tank cars with

fuel: "...The hold-up of a day or two occurred due to the fact that we were waiting for the opening of train traffic on the head railroad section. In moving a tanker train 100-150 km closer to the troops, we saved at least 1,000-1,500 tons of gasoline. Each time we had to think whether we should unload the gasoline 300 km from the troops in order to return the tank cars faster or wait a day or two until the railroad was repaired and thereby shorten the run of tank trucks by 100-150 km.(7)

With the moving of combat into the territory of adjacent states, new difficulties arose in the delivery of materiel. Due to the difference in the railroad gauges on Soviet territory and in these countries, the rear services of the fronts had to additionally organize the transloading of fuel at the border stations and certain of the most important railroad sections even had to be regauged to the Soviet width. Fuel delivery was also complicated by the fact that in the zones of advance of the fronts there were major water obstacles running laterally and the bridges across these had been destroyed by the enemy. This seriously impeded the organizing of through rail traffic on the lines of communications.

In accelerating the turnaround of the railroad tank cars, an important role was played by employing railroad "shuttles" for delivering fuel to the fronts and consisting of 20-25 four-axle tank cars each. The "shuttles" were assigned numbers and also assigned to definite fronts where they traveled from the fuel loading point to the railhead and back.

For accelerating the delivery of fuel to the operational army, on the railroads which were not in the frontline area each month they organized 40-50 "reserved" trains of empty cars which were dispatched to the fuel loading points in the interior of the nation and from here traveled to the fronts. In the necessary instances they also employed the so-called lighter trains which were introduced under agreement between the TsUPVOSO [Central Directorate of Military Railroads] and the NKPS [People's Commissariat of Railroads]. Due to all of this, the traveling speed of the trains carrying fuel during the concluding operations in certain instances approached 600-700 km a day. This was a major accomplishment for those times.

By the GKO Decree "On Measures to Accelerate the Turnaround of Tank Cars" adopted on 19 October 1943, trains carrying fuel were given priority over all other trains. The time for redirecting consists carrying fuel to the railheads of the fronts was strictly limited. The military councils of the fronts were obliged to reallocate them within an hour from the moment of arrival. Tank cars were permitted to remain not more than 4 hours in unloading. The adopted measures significantly accelerated the turnaround of the tank cars.

Water transport was also widely employed for hauling fuel, particularly after the liberation of Odessa, where fuel began to be delivered by tanker from Batumi and Tuapse. As a result, the distance traveled by the railroad tank cars was significantly shortened. The routing of the cars carrying fuel, particularly the "shuttles," and "reserves" consists were strictly monitored by the VOSO [Military Railroads] and fuel service bodies.

On the territories of Romania, Bulgaria and Hungary, the Nazi troops, in retreating hurriedly, as a rule, did not succeed in greatly damaging the railroads. Here there was a large number of tank and other cars which created good conditions for transport. Nevertheless, due to the differing width of the railroad gauges there were difficulties along both sides of the Soviet-Romanian frontier. In order to more efficiently deliver fuel to the Second and Third Ukrainian Fronts, in the autumn of 1944, they organized the transloading of the fuel from one type of transport to another. Fuel for the Third Ukrainian Front (chief of the fuel supply section, Maj Gen Tech Trps I.B. Igritskiy) was delivered in railroad tank cars to the Port of Izmail. Here gasoline pumping stations moved it to tanker barges. At the Romanian port of Tulcea the fuel was pumped out of the barges into Romanian tank cars and moved by Western European gauge railroads to the destinations: to the front and army dumps. The moving of fuel across the Romanian-Bulgarian frontier between the Danubian ports of Giurgiu (Romania) and Ruse (Bulgaria) was carried out without transloading in tank cars on a rail ferry.

In the course of the 1945 winter campaign a difficult situation with fuel supply arose in the rear of the Third, Second and First Belorussian Fronts and the First Ukrainian Front. The chief of the fuel supply section of the Second Belorussian Front, Gen A.G. Kovyrzin, in reporting on this question to the chief of the Soviet Army USG, Gen M.I. Kormilitsyn, pointed out that a major difficulty in supply was created by the transloading of fuel from the Soviet to the Western European railroad gauge. There were no tank cars of the Western European gauge. The "shuttles" were organized using small containers from the front and army dumps and loaded on flatcars. They moved extremely slowly, some 80-100 km a day. Approximately the same situation had arisen on the other fronts fighting on Polish territory. For this reason the only correct solution which would ensure continuous delivery of materiel, including fuel, to these fronts was the respiking of the main lines to the Soviet gauge. Thus, by the start of the Berlin Operation, materiel, chiefly ammunition and fuel, were delivered to the First Belorussian Front basically along the frontal railroad line of Brest--Warsaw--Poznan--Frankfurt-am-Oder which had been respiked to the Soviet gauge. In the area of the First Ukrainian Front, the main line of Przemysl--Krakow--Breslau (Wroclaw) had been respiked. Transloading depots were located on both railroads. Fuel was carried in Soviet tank cars to the head stations where the transloading depots were located. Here it was reloaded to the front "shuttles" made up of captured tank cars and flatcars with tanks mounted on them and these moved further along the Western European gauge.

Fuel was moved across water obstacles over field pipelines. Thus, on the Second Belorussian Front in the course of the East Pomeranian Operation, before the repairing of the bridges across the Vistula, two pipelines were built in the areas of Fordon and Graudenze (Grudziadz) and over which over 5,500 tons of fuel were moved. As a result during the entire operation the front did not experience interruptions in fuel supply.

Regardless of the acute shortage of railroad rolling stock, the measures aimed at accelerating the delivery of fuel to the fronts made it possible for the Rear Services of the Center to steadily increase the dispatch of fuel from the refineries and transloading depots in accord with the growing demand of the

troops. Thus, while in 1943 (April-November) the average daily dispatch of fuel to the fronts was 969 tank cars, in 1944 (June-December) this had risen to 1,484 and by the end of the war exceeded 1,500 tank cars.(9)

In the offensive operations during the third period of the Great Patriotic War, due to the scope of the forthcoming operations and the difference in railroad gauges on the territories of the Soviet Union, Poland and East Prussia, it was not possible to transport fuel to the troops in Soviet tank cars. For this reason on the fronts particular attention was given to preparing and utilizing motor transport for carrying the fuel. For example, the First Belorussian Front by the start of the Vistula-Oder Operation had front fuel transport equipment for 1,500 tons and army equipment for 4,100 tons (a total of 0.35 of a fuel load). The First Ukrainian Front, in addition to the front, army and organic transport for carrying fuel, had in the front reserve some 190 tank trucks which could hold 450 tons. The lack of specialized tanker motor transport was partially compensated for by sided vehicles which were loaded with fuel barrels. The personnel of the rear services and troops was mobilized to collect the barrels. In the motor vehicle units and subunits, special vehicles were equipped for carrying fuel barrels.

The operations of 1944 showed the inadvisability of establishing diesel fuel supplies equaling 10-15 loads prior to the start of the offensive. The fronts, in moving forward rapidly, often left behind a significant portion of the unconsumed fuel supplies. This fuel was turned over, as a rule, to the military districts organized on the liberated territory. For this reason, in preparing the operations for the 1945 campaign in Europe, diesel fuel supplies were set in much smaller amounts (three or four fuel loads). The tank and mechanized troops virtually did not experience interruptions in fuel supply. But for this continuous delivery of diesel fuel was required both by rail by the Rear Services of the Center as well as by the motor transport of the fronts and armies, formations and units.

As the Soviet Army liberated territory where there were oil-producing and oil-refining enterprises, the fuel supply bodies, in showing initiative, boldness and tenacity, organized the production of oil products and even oil production here. Thus, the Fuel Service of the 18th Army (chief of the Fuel Supply Section, Lt Col S.I. Isayev) in the carrying out of the Carpathian-Dukla Operation by the Fourth Ukrainian Front, helped restore oil output on the liberated territory of the Western Ukraine and organized its refining at certain local oil refineries. From these enterprises the army received over 6,000 tons of oil products in August-December 1944. For the 3 last months the troops were supplied with the main types of fuel solely from local resources, without transporting them from the rear of the nation. This made it possible for the front's fuel supply section to increase the delivery of fuel to the other armies.

As a result of the successful offensive by the Second and Third Ukrainian Fronts, the possibility arose of using the Romanian oil industry for the needs of the war. Thus, in the second half of 1944, the situation with fuel resources on the southern wing of the Soviet-German Front noticeably improved. Fuel deliveries from Romania to the Soviet Union were carried out under the

corresponding agreements concluded between the USSR and Romania. For delivering fuel from Ploesti, Romania, to Reni, USSR, a sectional pipeline was laid some 225 km long and with a productivity of 40 cubic m an hour. This made it possible to accelerate the delivery of fuel to the troops of the operational army.(10)

In planning, preparing and conducting the Berlin Operation, the commanders and their staffs carefully considered and calculated the capabilities of the rear services to supply fuel to the troops. This is clearly seen from a telegram of the Military Council of the First Belorussian Front to Hq SHC on 24 January 1945:

"To the Supreme Commander-in-Chief, MSU, Comrade Stalin.

"The troops of the front in 10 days of a rapid offensive operation have reached the line of Bromberg--Poznan--Jarocin, having covered a distance of 350-400 km over the roads.... Motor vehicle gasoline has been the limiting factor: its consumption over the 10 days of the operation was 14,500 tons, an average of 1,450 tons a day, that is, 0.3 of a front fuel load. In recent days the daily consumption has increased to 2,500 tons, since the troops are 400 km away from the depots.... The front is taking decisive measures to reduce gasoline consumption and primarily to quickly put the railroads back into service. The front's military council feels that by the start of the third stage of the operation the front should have 3 loads of gasoline supplies or 14,600 tons.... As of 23 January 1945, the front had 11,178 tons of motor gasoline, or 2.4 front fuel loads, including the fuel in the vehicle tanks. Prior to 1 February, the front is to receive 12,512 tons and will have a total of 23,690 tons. Over the period from 23 January through 1 February, approximately 13,500 tons will be consumed, with 10,190 tons remaining on 1 February, that is, 2.1 fuel loads along with the fuel in the vehicle tanks. In essence, this means a slowed advance. In order to have 3 fuel loads by 1 February, the front must receive an additional 4,400 tons with delivery to the front's railhead by 1 February without fail. We have planned the subsequent consumption in conducting the third stage of the operation for 35,000 tons over a period of 20 days or an average daily consumption of 1,750 tons, or 0.36 of a fuel load. We request planning for the delivery of 35,000 tons: 20,000 tons for the first 10-day period and 15,000 tons for the second 10-day period. Then the front will reach Berlin with 3 fuel loads.

Zhikov, Telegin."(11)

Such careful figures on the highest level to establish the demand for fuel are convincing proof of the importance given to it in carrying out the strategic plan for the final defeat of Nazi Germany.

During the offensive operations of the third period of the Great Patriotic War, the volume of fuel delivered to the fronts rose significantly. Here rail transport played the main role in its supply. With the entry of the Soviet Army into the territory of neighboring states, the proportional amount of motor transport in fuel deliveries rose significantly. Later, with the

respiking of certain Polish railroads to the Soviet gauge, a larger portion of the fuel began to be delivered to the regulating stations on these roads and this noticeably facilitated the task of replenishing supplies on the fronts.

With a significant distance of the troops from the supply depots, the fronts in a matter of necessity received immediate aid from the Rear Services of the Center in the form of fuel delivered by motor transport and in critical moments also by air from the reserve of the chief of the Soviet Army Rear Services.

The operations of the third period of the Great Patriotic War were supplied with fuel virtually continuously. The personnel of all elements of the fuel service during them gained rich experience in providing fuel to large troop groupings. This has largely kept its importance today. This applies primarily to such important elements in preparing and supporting strategic operations as the early establishing of fuel supplies, the integrated use of all types of transport to deliver, organizing dependable and rapid transshipping of the fuel at connecting points of the lines of communications as well as the skillful use of local capability to obtain fuel and allocate its supplies. Of particular importance was the constant and clear coordination of the fuel service with the bodies delivering and transloading the fuel. Under present-day conditions, in line with the full motorizing of the Armed Forces and the significant increase in fuel consumption per day of combat and an operation, these elements in organizing fuel supply assume a crucial role.

FOOTNOTES

1. V.V. Nikitin, "Goryucheye--frontu. 1941-1945" [Fuel for the Front. 1941-1945], Moscow, Voenizdat, 1984, pp 44, 111.
2. Ibid., p 83.
3. "Tyl Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voynye 1941-1945 gg." [Rear Services of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, 1977, p 183.
4. Ibid., p 137.
5. V.V. Nikitin, op. cit., p 84.
6. Ibid., p 91.
7. N.A. Antipenko, "Na glavnom napravlenii" [On the Main Axis], Moscow, Nauka, 1967, p 153.
8. [Not in text]

9. V.V. Nikitin, op. cit., p 151.
10. "Tyl Sovetskikh Vooruzhennykh...", p 184.
11. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 233, inv. 213, file 74, sheet 23.

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WAYS TO IMPROVE PARTY POLITICAL WORK ON THE OFFENSIVE

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[Article, published under the heading "Party Political Work," by Maj Gen V.K. Luzherenko, candidate of economic sciences; the article was written from the experience of postwar exercises]

[Text] Under the conditions of the sharp exacerbation of the international situation brought about by the aggressive aspirations of the imperialist circles headed by the United States, the Communist Party and the Soviet government have been forced to initiate all necessary measures to strengthen the nation's defense might and increase the combat readiness of the Army and Navy. In the CPSU Program adopted by the 27th Party Congress, the Armed Forces were given the task of "showing high vigilance, and always being ready to thwart the intrigues of imperialism against the USSR and its allies."(1) In carrying out this task an important place is held by the constant improvement in troop field skills. In the course of maneuvers and multi-day exercises the troops gain the ability to conduct active and decisive combat operations against a strong, technically equipped enemy under the conditions of its employment of weapons of mass destruction.

Along with other factors, party political work holds an important place in improving tactical training. Over the postwar years, very rich experience has been gained in its organization and conduct under the most diverse conditions of exercises and maneuvers, primarily on the offensive which is the main type of military actions of the Soviet Army.

At the major exercises of this period, particularly those such as Dnepr [Dnieper], Karpaty [Carpathians], Dvina, Berezina, Nemан, Zapad-81 [West-81], Shchit-84 [Shield-84] and others, the forms and methods of party political work were steadily improved in mobilizing the personnel for active, enterprising and rapid actions during offensive combat and views were elaborated on the ways for increasing the effectiveness of this work and strengthening the influence on the men.

The acquired experience shows that the effectiveness of party political work on the offensive to a significant degree is determined by how much this work

corresponds to the battle tasks and how it considers the training level of the command and political personnel, the soldiers and NCOs.

The bases of such congruity are established in the planning of the party political work for the offensive combat. During the postwar years, the methods of planning this work have been constantly improved. Up to the mid-1960s, the political bodies and the deputy commanders for political affairs ordinarily drew up several plans: for the period of preparing for combat, during the combat training actions both with the employment of conventional weapons and in the event the enemy uses weapons of mass destruction, carrying out such tasks as crossing a water obstacle, repelling a counterattack and so forth.

Practice has shown that such an approach to planning was not effective. In subsequent years, a single plan was drawn up for party political work for the period of preparing and conducting the offensive combat training. This plan was designed for any method of actions both with the employment of solely conventional weapons as well as in the event of the enemy's employment of weapons of mass destruction. Here possible variations in the development of the situation were provided.

The quality of the planning of party political work and its effectiveness depend largely upon a profound and thorough elucidation by the chief of the political body (the deputy commander for political affairs) of the received battle task, the instructions of the senior political body and the plan adopted by the commander as well as the political worker's knowledge of the essence of modern combined-arms offensive combat and his understanding of the moral-political state of the personnel and the strong and weak points of the enemy.

An important means for increasing the effectiveness of party political work is the placement of political workers in the units, subunits and elements of the battle formation. This was confirmed, in particular, by the experience gained in the demonstration tactical exercise held on the eve of the 40th anniversary of Great October in the Kiev Military District by a tank unit and involving the underwater crossing of the Dnieper by tanks.

This was the first time that such an exercise was conducted in our Armed Forces. Considering its importance, the newness of the tasks carried out in it and requiring exceptionally high moral-psychological stress on the personnel and honed combat skill, the district political directorate focused its efforts on providing help to the political workers in mobilizing the personnel to successfully conduct the exercise.

During the period of preparing for the exercise and in the course of it, working in the unit were the district military council member, Lt Gen N.M. Aleksandrov, the chief of the political directorate, Maj Gen A.G. Gromov and many officers from the political body. They were constantly in the battalions and companies and together with the personnel they worked out the procedures for waterproofing the tanks, the procedure of crew actions in the moving of the tank across the river bottom, organizing rescue and salvage work and so forth. A majority of the officers from the political directorate as

part of the tank crews crossed the river bottom two or three times. This helped them understand the moral and psychological state of the tank troops, to work out the most effective forms of party political work and provide specific aid to the commanders and political workers of the subunits.

As a result of the effective and constant party political work, by the start of the exercise, all the personnel had been mobilized for unstinting action, they burned with the desire to carry out the responsible tasks in an exemplary manner and did this successfully. The unit produced masters of tank driving under difficult conditions. MSgts G. Istomin and I. Marinets, Sgts G. Zyulin and N. Karpov crossed 70-80 times in the tanks under water, while the tank commander Jr Sgt S. Vakulyuk and the driver Jr Sgt P. Filippov crossed the water obstacle 92 times.(2)

The well conceived placement of the political directorate officers made it possible for the political body not only to increase the effectiveness of the party political work in the exercise, but also to completely generalize its experience. This contributed largely to the skillful organizing of the ideological and party organizational activities in the exercises involving the underwater crossing of rivers in other districts.

In the course of the Great Patriotic War and during the exercises conducted in the postwar years, a uniform approach has been elaborated to allocating the political workers: the most experienced and skilled of them are sent to those units and subunits which are to carry out the most crucial tasks (participate in destroying the primary enemy targets, fight on the axis of the main thrust or away from the main forces, repel enemy counterattacks and so forth). Moreover, as the experience of the limited contingent of Soviet troops in Afghanistan has showed, frequently the need arises for sending well trained political officers to those subunits where the political workers do not have the required skills in organizing party political work in a combat situation.

In modern offensive combat with its great pace and wide spatial scope, particular importance is assumed by the ability of each commander and political worker independently, without waiting for instructions, to organize party political work in accord with the developing situation. For precisely this reason one of the ways for improving party political work on the offensive is the well thought out and careful instructing of the commanders and political workers, the party and Komsomol aktiv and familiarizing them with the forms and methods of party political work under combat conditions. For example, in the Dvina Exercises, the instruction session included an explanation of the situation and the battle task for the unit, a plan for political work on the offensive, the assigning of specific tasks and recommendations concerning the ways for influencing the personnel in combat.

For successfully conducting party political work on the offensive it is very important to maintain a strong tie between the divisional political section and staff and closely coordinate their efforts. This is achieved primarily by the personal contact between the officers of the staff and political section, and by their providing of reciprocal information on questions requiring the organization of joint measures aimed at ensuring high combat readiness of the

units and subunits, strengthening the political and moral state of the personnel and their all-round preparation for combat.

In particular, this was how party political work was organized on the offensive in the course of the Zapad-81 Exercises. The officers from the divisional political section and staff achieved high moral-political and psychological readiness of the personnel to carry out the set tasks. They gave particular attention to elucidating the questions of further strengthening the nation's defense capability and the combat might of the Armed Forces under the conditions of a complex military-political situation. Around one-half of all the agitation and propaganda measures was devoted to this. The providing of political and combat information for the men during the exercise was carried out virtually continuously.(3)

The exercises of the postwar period have shown persuasively that one of the most effective ways for mobilizing the personnel to successfully carry out the battle tasks is a further improvement in the organization of their political training under combat conditions and this should be carried out considering the military-political situation and the battle tasks. For officers in the process of this, lectures and reports are given, political reviews and information sessions are conducted and if conditions permit, colloquiums and seminars. For the warrant officers [praporshchik], NCOs and soldiers, political hours, political conversations and political information sessions (for the subunits) are organized.

A differentiated approach to the work with the personnel and primarily with the officers who are the organizers of combat helps to ensure high effectiveness of party political work on the offensive. Particular attention is paid to those who have recently completed a school, who have been called up from the reserves as well as those who have not held a given position long enough or were just appointed to it.

The forms of work with the officers are determined chiefly by the length of the preparatory period. For example, in an exercise in one of the regiments of the groups of Soviet troops in Germany, for the officers lectures were given on the subjects "The Organization and Armed Forces of NATO," "Enemy High-Precision Weapons and Methods to Combat Them," and "Actions of a Motorized Rifle Regiment on the Offensive in the Division's First Echelon." Speaking to them were participants of combat in Afghanistan. An instructional exercise on organizing party political work in combat was held for commanders of companies where there were no deputies for political affairs.

If the lack of time or the dispersion of the units and subunits did not permit the conducting of similar measures, individual work becomes the basic form for the officers. This is combined with brief instruction sessions for individual groups of officers. In a word, any opportunity is employed for the ideological conditioning of the officers and for enriching their knowledge in tactics and the procedure of actions in combat.

Modern offensive combat requires from the personnel the skillful mastery of weapons and combat equipment. An important means for improving party political work in the course of the postwar exercises has been the more

careful consideration of the particular features of the tasks to be carried out by the men as well as the conditions under which they are to act.

Thus, in the Zapad-81 Exercises, certain young soldiers, in remaining for a long time in their infantry combat vehicles, experienced so-called psychological discomfort. Individual tank crews did not keep their place in the line of the battle formation. Thoughtful party political work, in being aimed at developing in the personnel a moral-psychological strength for actions under unusual conditions, helped to overcome this phenomenon.(4)

The dissemination of advanced experience holds an important place in the work of improving the combat skill of the men. Here the most effective method is the actual demonstrating of the procedure and rules for handling equipment under conditions close to those under which combat will occur. Such a method in being widely practiced during the years of the Great Patriotic War has been developed in the exercises of recent years. In particular, during the Karpaty Exercises, upon the initiative of the party committee of one of the tank regiments from the Carpathian Military District they organized a demonstration for the drivers for the procedure and rules of driving a tank under mountain conditions. The experienced specialist, WO N. Charnik, told about the methods for overcoming difficult areas of mountain routes and demonstrated several times how this should be done. Later, the drivers worked out the difficult procedures of driving independently. Along with other measures this helped to successfully carry out a march under mountain conditions.

The studying of various memoranda and leaflets issued by the political bodies helps to introduce advanced experience. At one of the exercises, for example, the Political Directorate of the Group of Soviet Troops in Germany published leaflets devoted to combating the tanks and armored vehicles of the probable enemy. These told of the vulnerable places in these armored objects and contained advice on employing weapons to destroy them. In a number of the military districts they have issued instructions on defense against high-precision weapons and the combating of these.

Advanced experience is widely treated by the military press in the course of major exercises. In the Dvina Exercises, in particular, the editors of the district newspapers KRASNYY VOIN, NA STRAZHE RODINY, VO SLAVU RODINY, ZA RODINU and KRASNOYE ZHAMYA as well as the soldier papers did a good job. The tone of all the military press was set by KRASNAYA ZVEZDA. The newspapers published reports, correspondence, articles, procedural materials as well as stories generalizing new tactical procedures and the methods of employing equipment and weapons under various conditions. All these materials were actively employed in party political work with the men and helped increase its effectiveness.(5)

The exercises and maneuvers of the postwar years show that one of the important means for improving party political work in offensive training combat is to increase the role of the party organizations in the units and subunits in mobilizing the men to successfully carry out the set tasks. Significant experience has been gained in having the communists set a personal example. This is achieved primarily by specific assignments for the period of preparing and conducting combat and the nature of these is set by the

situation, the place of the communist in carrying out the set tasks as well as by the capabilities of carrying out various assignments. Thus, in providing aid to an Afghan subunit in defeating a bandit ambush, the communists in one of the companies were instructed to explain the set mission to the personnel, by a personal example and skillful actions to inspire the men, to instill confidence in victory in them and to provide the greatest possible help and support to the young soldiers. One of the communists was ordered to erect a flag on the captured dushman command post.

The party organizations see to it that each communist takes an active part in ideological indoctrination, in measures aimed at improving the readiness of the personnel for combat and mobilizing the men for unstinting and enterprising actions under any conditions. For example, during the Neman Exercises the communists from one of the regiments of the Baltic Military District took an active part in providing political and combat information for the personnel, in the work of the open Komsomol meetings and in holding political hours on the subject "V.I. Lenin and the CPSU on the Aggressive Essence of Imperialism. Tasks of the Personnel to Further Increase Vigilance." They explained to the men the coming tasks and the requirements of the regulations, they acquainted them with the content of various instructions and so forth.(6)

Correctly organized activities of the staff party organizations helps largely to increase the effectiveness of party political work on the offensive. The party organizations assign political information reporters from their personnel and plan their work and see to it that the staff communists take an active part in the political indoctrination measures of the units and subunits where they are sent to carry out official assignments, as well as in providing political and combat information for the men.

With the start of the offensive, the efforts of the commanders and the political workers are directly primarily at ensuring bold, decisive and enterprising actions to promptly carry out the combat training tasks. The effectiveness of their work is achieved by the constant maintaining and increasing of the offensive drive of the men, by constantly informing them of the situation developing on the battlefield, by the skillful choice of the most effective forms of political influence on the personnel as well as by the continuity of this influence. The experience gained by the men carrying out their international duty in Afghanistan merits attention. Here they see to it that in every armored vehicle, crew or team there is a communist or Komsomol activist who is possible has been previously involved in fighting. The company and battalion political workers instruct them ahead of time, they share their experience with them, they ascertain which of the men needs support in combat and provide advice on how to better give help.

Similar experience was widely employed in the Shchit-84 Exercises in the course of which the activists working directly in the subunits helped greatly in ensuring uninterrupted party political work. They set the example for the men in "combat," they explained the combat training tasks to them and carried out agitation work.

Regular information for the personnel about the successes of the unit, the formation or combat feats of comrades helps in achieving high effectiveness of party political work aimed at maintaining and boosting the offensive drive of the men. The experience of the Great Patriotic War has shown that information about victories achieved over the enemy, the propagandizing of the successful actions of outstanding men and their prompt presentation for decorations and commendations have an inspiring influence on increasing the morale of the men.

In working to increase the offensive drive of the men, the commanders, the political workers and the party organizations indoctrinate them in hate for the imperialist aggressors. Meetings conducted in the course of the Dnepr, Karpaty, Neman, Dvina, Zapad-81 and other exercises by fraternal graves and monuments to the victims of fascism and meetings with the veterans of the Great Patriotic War and former partisans where they described the crimes and atrocities of the Nazis on the occupied territories of the Ukraine, Belorussia and the Baltic mobilized the men to exemplary fulfillment of combat training tasks.

At present, the opportunities for intensifying this work have been significantly widened. The political workers and the agitation-propaganda aktiv possess diverse propaganda equipment. In using the examples of the aggressive actions of the imperialists, of their suppression of the revolutionary and national-liberation movements as well as retribution against progressive leaders, they persuasively unmask the antipopular face of imperialism and our probable enemies.

It is hard to increase the effectiveness of party political work without the greatest possible intensification in the activities of the Komsomol organizations in the units and subunits. Increasing the party stratum in the Komsomol, careful selection, placement and instructing of the Komsomol aktiv, professional help for them by the commanders and political workers in organizing work with the youth--all of this makes it possible to ensure that the Komsomol members set an example and this ultimately helps in successfully carrying out the tasks of the offensive.

Thus, the most important conditions for increasing the effectiveness of party political work on an offensive are its precise conformity to the tasks and nature of the specific training combat, the active involvement of all the commanders, political workers, communists and the Komsomol aktiv in it, and focusing the efforts of organizational and ideological indoctrinational work on maintaining and boosting high offensive zeal in the personnel, that is, an aware desire to carry out the set task at whatever the cost.

The carrying out of the complex and responsible tasks posed by the 27th CPSU Congress for the Soviet Armed Forces requires a further improvement in party political work in all areas of life and activities of the troops, including in exercises, in a situation as close as possible to actual combat.

FOOTNOTES

1. "Materialy XXVII sъезда КПСС" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 161.

2. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 131, inv. 770581, file 13, sheets 154-155.
3. Zapad-81 [West-81], Moscow, Voyenizdat, 1982, p 12.
4. Ibid., p 13.
5. "Dvina," Moscow, Voyenizdat, 1970, p 23.
6. "Neman," Vilnius, Mintis, 1980, pp 207-208.

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MILITARY HISTORY EDUCATION AT MILITARY SCHOOLS DISCUSSED

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 68-72

[Article, published under the heading "Military History Work in the Troops and VUZes," by Col N.T. Zavgorodniy, candidate of historical sciences, docent: "On the Question of Training Students and Officer Candidates"]

[Text] The editorial published in VOYENNO-ISTORICHESKIY ZHURNAL, No 1, 1987, entitled "Military History Work--On a Level of Modern Requirements" evoked lively interest among the military history instructors. It raised timely questions of improving military history training for the students of military academies and schools. We would like to voice our considerations on this question.

Military history knowledge plays an enormous role in the training of military personnel. MSU B.M. Shaposhnikov has written: "The academy instilled in me a love for military history and taught me to draw conclusions from it for the future. I have generally always liked history as it has been a bright marker on my path. In the future, we must continue to study this repository of wisdom."⁽¹⁾ He did this all his active life with great affection and tenacity.

Under present-day conditions, the importance of military history knowledge in the question of studying and indoctrinating officer candidates and students of military schools has been growing, since only in passing on combat experience to the students and in acquainting them with the laws, patterns and principles in the development of military art and the lessons of military history is it possible, in particular, to more successfully carry out the task posed for the higher school by the 27th CPSU Congress, that is, to turn out specialists who "combine high professional training, ideological-political maturity and the skills of organizational and managerial activities."⁽²⁾ A study of the very rich military history experience, particularly from the period of the Great Patriotic War and the postwar years, helps to widen the military-political viewpoint of the command and political personnel and aids them in creatively approaching the training and indoctrination of subordinates and in preventing errors. Military history training has a great role to play in indoctrinating in the military personnel political vigilance, feelings of hate for the enemies of socialism and unswerving will for victory over them. The General

Secretary of the CPSU Central Committee, M.S. Gorbachev, has emphasized that our victory in the Great Patriotic War "is not a matter of the past. This is a living victory turned to the present and to the future."(3)

Unfortunately, it must be admitted that the level of military history knowledge among officers entering academies does not always correspond to the demands of the times. At times, they do not have sound knowledge in military history studied in military schools. Certain officers before admission to the academy worked little on widening their military history viewpoint.

An analysis of the military history training for students in the first years of the Air Forces Academy imeni Yu.A. Gagarin over the last 10 years has shown that a portion of them does not have a sufficiently profound knowledge of the history of wars, the history of the rise and development of the air forces and other questions, and they read little military history and memoir literature. This tells negatively upon the students' deepening of their military history knowledge during the period of studies in the academy.

Flaws in the curriculum of the course of the history of military art have also been felt. In particular, this does not pay proper attention to training in the work methods of commanders (superiors) in conducting military history work in the troops. The interest of the students in studying the history of military art has been reduced by insufficient practical focus to the course and its link to the programs of the operational-tactical and social disciplines.

The problem of further increasing the level of military history knowledge among officers requires the greatest possible improvement in the process of the recruitment, training and retraining of the personnel of military historians. At present, only the Military Academy imeni M.V. Frunze has a military history department. In the other academies, specialists in the military history area are trained by graduate work. However, over the last 15 years of those finishing graduate studies at the Air Forces Academy imeni Yu.A. Gagarin only two were sent to higher military aviation schools.

We feel that help in solving the problem of planned and skilled training for instructors of the history of military art for the military academies could be provided by the Military Academy of the General Staff imeni K.Ye. Voroshilov where previously there was a military history department. Obviously, the time has come to open under the academies of the Armed Services military history departments which would turn out instructors of military history for the higher military schools as well as specialist historians for the staffs. Undoubtedly it would be beneficial to establish courses for the advanced training of military historians of military academies under the Military History Institute of the USSR Ministry of Defense and similar courses for the military schools under the military academies of the Armed Services.

In drawing on the experience of the social sciences chairs of the Moscow military academies and schools, it would be advisable to periodically hold seminars for military historians where they could organize the giving of a series of lectures on the history of military art, historiography, bibliography, pedagogics and psychology of the higher military school and

exchange experience in carrying out the decisions of the 27th CPSU Congress and the January (1987) Plenum of the Party Central Committee.

We all know what an important role is played by educational methods in improving the professional skill of the instructors and intensifying the training exercises on military history disciplines. In this area the chairs of the history of military art at the military academies have done a good deal. They have increased the level of conducting the procedural assemblies for the faculty and sessions of the chairs, better teaching materials, visual aids, special methods and educational aids are being developed, and special classrooms established. Instructor-procedural and open exercises are being held, new procedural methods are being tested out, and other interesting and useful measures organized. The chairs of the history of military art, particularly at such senior military schools as the Military Academy of the General Staff imeni K.Ye. Voroshilov, the Military Academy imeni M.V. Frunze, the Military Academy of the Armored Troops imeni R.Ya. Malinovskiy and the Military-Political Academy imeni V.I. Lenin, have gained rich experience in raising the level of the educational skills of the faculty. However, as yet this is not being propagandized sufficiently.

It would be desirable by collective efforts of the military historians to create the work "Metodika prepodavaniya voyenno-istoricheskikh distsiplin" [Procedures in Teaching Military History Disciplines]. It would be advisable to also devote a dissertation to this problem. The journals of the Armed Services could make a more marked contribution to improving the educational skills of the faculty by systematically publishing in their pages materials under the heading "Military History Experience Teaches." This is particularly important due to the fact that teaching in military academies and schools now involves many officers who do not have special training and pedagogical experience and the presence of such publications and articles will help in their more rapid development as well as in improving the educational level of experienced instructors.

A more profound and faster dissemination of educational experience would be aided by including instructors from the chairs of the history of military art in the commissions of the Main Inspectorate of the Ministry of Defense, the Main Directorate of VUZes and others involved in inspecting the military academies and schools.

An important role could be played by clarifying the names of the military history disciplines in the academies and schools, their goals as well as a more reasonable distribution of study time according to the sections of the curricula.

An analysis of the standard curriculum for a course of military history for the military schools and institutes indicates that these military schools study the history of wars and primarily World War II, as well as the history of the organizational development of the armed forces. We feel that the military schools and institutes should study the history of wars as the basis of military history knowledge.

In the process of studying the history of wars, the officer candidates are obliged to profoundly assimilate their socioeconomic essence and reasons of occurrence, the plans of the belligerents, the course of military operations, understand the reasons for victories and defeats and realize how major wars have influenced the development of tactics; they must learn to creatively employ the lessons and experience of the wars in the defense of the socialist fatherland as well as the local wars of the postwar period for studying tactical disciplines in the school, in the training and indoctrinal work with the personnel and for unmasking bourgeois falsifiers; they must become familiar with the history of the rise and development of operational art.

This will be greatly aided by the recently introduced new standard curriculum for the course of military history for military schools and military institutes.

The course of the history of military art in the military academies of the Armed Services and branches of troops must, without duplicating the curricula of the history of wars, significantly widen the military history viewpoint of the students. Those who study this should profoundly understand the questions in the development of the operational-tactical disciplines and creatively carry out the tasks confronting the troops. They must know the history of the rise and development of the types, methods and forms of armed combat, the particular features of the influence of the most important factors on this process, the laws, patterns and principles in the development of military art as well as the history of the development of tactics and operational art; they must be able to analyze the ways the most important factors influence the development of operational art and tactics; they must creatively employ rich combat experience in studying operational-tactical disciplines in the academy, and in training and indoctrinating subordinates; they must have an idea about the rise and development of military strategy. Here one of the most important tasks for the faculty is to develop in the students high moral-political, combat and professional qualities drawing upon the examples of the heroic feats of the Soviet soldiers, the active and decisive operations of the units, formations and field forces as well as a creative approach by the commanders, staffs and political bodies to troop command.

Over the last 40 some years, revolutionary changes have occurred in the development of military art. For this reason the course curriculum should pay more attention to studying the history of operational art and tactics in the postwar period. We feel that significantly more study time should be devoted to this than is presently the case. Then the students will be able to more profoundly understand the pattern and continuity of the historical development of military affairs as well as the dialectical succession of military history experience. Chronologically the curriculum of the history of military art will be brought closer to the curricula for the operational-technical disciplines of the military academies.

The times urgently demand the incorporation into the standard curriculum for the history of military art more generalizing subjects which bring out the laws, patterns and principles for the development of military art and which show what the historical experience of its development teaches as well as on the methods of organizing military history work in the troops.

A restructuring of the teaching of the history of military art would do well in further raising the level of military history knowledge of the military personnel and in making fuller utilization of the intellectual potential of the officers. We see the main ways for resolving this problem by improving the curricula and subject plans by the collectives of the chairs of military history, by reallocating time to the various types of exercises, publishing textbooks which encourage thoughtful independent work by the officers not only during studies in the academy but also during the period of service in the troops.

With the publishing by Voyenizdat in 1984 of the textbook "Istoriya voyennogo iskusstva" [History of Military Art] and teaching aids and lecture courses in the academies of the Armed Services and branches of troops, a good opportunity has arisen for increasing the proportional amount of practical exercises with the students in the subject plans. Of course, we must not play down the role of lectures. But still, as is shown by the experience of the chair of the history of military art at the Air Forces Academy imeni Yu.A. Gagarin in 1981-1986, the knowledge gained independently and reinforced under the leadership of the instructor in group exercises and seminars proved to be sounder. For this reason, in the subject plan for the 1986-1987 academic year, practical exercises (group, seminars and written exam work) have received almost double the number of hours than in the plan for the 1980-1981 year, that is, 60 percent in comparison with 32. This encourages the intellectual activities of the students, competitiveness in the independent study of the subject, and encourages a critical assessment of the obtained results. Reserves for intensifying the training and indoctrinal process lie in a well-conceived system of independent work for the students. Such an approach helps to improve the professional and military history training of the students. The faculty cannot give the students the same military history information which military history science will possess in the 21st Century, but, having taught them to study, it will prepare them for the independent acquisition of knowledge in the future.

In our view, a higher level of military history knowledge among the students would be aided by introducing in the academies a standard form of reporting on the studied course of history of military art, that is, an examination. At present, some academies employ a quiz, others a differentiated quiz while still others employ an examination.

In taking a quiz the students are not granted time to prepare independently for it. And this prevents them from systematizing the knowledge gained in the course of studying the course which covers a great deal of information.

A further rise in the level of the students' military history knowledge is inseparably linked not only with the search for ways to improve the training of military historians and seeking out more effective methods but also to improving the physical support for the chairs of the history of military art. The documents of the 27th CPSU Congress pointed to the need of improving the physical plant of the higher school.(4)

In line with the adjustment of the subject plans and curricula for the course on the history of military art, painstaking work must be carried out to establish or modernize the specialized classrooms and equip them with modern facilities, including computers. There must be better design, an increase in the number and the more active introduction of teaching equipment into the training and indoctrinal process. It is important to more widely employ television, movies as well as tape recorders, film strips and slides. Obviously, the time has come to make film shorts which demonstrate the work methods of the commanders, the staffs and political bodies in the course of preparing and conducting combat and which demonstrate what influence weapons have on the development of military art and so forth.

In their independent work of studying the history of military art the students will be greatly helped by the visual aids published by the academies, including albums of diagrams, bibliographic references and historiographic reviews of the most important military history and memoir literature.

In recent years, many chairs have begun to noticeably influence the enlarging of the military history resources of the academy libraries. However, it must be said that the organizing of the interlibrary exchange of teaching military history literature published in the academies must be improved.

A thorough study of the course on the history of military art in the military academies of the Armed Services and branches of troops is an important condition for establishing a sound base for further deepening the military history knowledge of the officer personnel studying in the Military Academy of the General Staff imeni K.Ye. Voroshilov. As a result of studying the history of wars and military art in this institution of learning, the students should know the history of the rise and development of operational art and military strategy and the influence of the most important factors on this process, the methods of work of the commanders, staffs and political bodies of the field forces in the course of preparing and conducting military operations, the laws, patterns and principles in the development of military art; they should be able to analyze the process of the effect of various factors on the development of operational art and military strategy; they should be able to creatively employ combat experience in studying military and social disciplines in the academy, in directing the training and indoctrination of subordinates as well as in military history and scientific work in the troops.

It would be very beneficial to pay more attention to increasing the military history knowledge among instructors of operational-tactical and social disciplines in the military academies and schools as well as the officers in the units and formations.

For instructors in the system of commander training, it would be advisable to make it a practice to give lectures and hold seminars on the timely problems of the history of military art and military historiography as well as show military history training films. The experience of preparing for the 40th anniversary of the victory in the Great Patriotic War showed that well prepared military conferences also play an important role in training and indoctrinating the faculty. A solution to this important problem would be aided by the publishing on a series of books on outstanding military leaders

and military historians, theoreticians and sets of their photographs as well as a fundamental work "Istoriya voyn i voyennogo iskusstva" [The History of Wars and Military Art] which would deal with the history of military strategy, operational art and tactics from the moment of their rise until the present. The value of this work, we feel, would be increased by appending a list of the most important works by Soviet and foreign authors devoted to military art.

Improving the military history training of officer candidates and students is an imperative of the times. The more careful recruitment of military historians, the improving of the system for their training and advanced training, the establishing of a better physical plant for the chairs of the history of military art, a new approach to studying military history disciplines in military institutions of learning and providing a high level of military history knowledge among the instructors of the operational-tactical and social disciplines at the military academies and schools--all of this will help to successfully carry out the tasks posed for the higher school by the 27th CPSU Congress and to increase the combat readiness of the units and formations.

FOOTNOTES

1. B.M. Shaposhnikov, "Vospominaniya. Voyenno-nauchnyye trudy" [Memoirs. Military Scientific Works], Moscow, Voenizdat, 2d Supplemented Edition, 1982, p 182.
2. "Materialy XXVII sъezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 167.
3. M.S. Gorbachev, "Bessmertnyy podvig sovetskogo naroda" [The Immortal Feat of the Soviet People], Moscow, Politizdat, 1985, p 3.
4. See: "Materialy XXVII sъezda...," p 315.

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U.S. MILITARY-INDUSTRIAL COMPLEX

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 73-80

[Article, published under the heading "From the History of the Nuclear Madness of Imperialism," by Col (Res) S.D. Petrov, candidate of military sciences]

[Text] In pointing to the unprecedented growth of military expenditures in the imperialist countries and in particular in the United States, the 27th CPSU Congress commented that the military-industrial machine is the locomotive of militarism. "The monopolies producing weapons, the generals, the state bureaucracy, the ideological apparatus and militarized science," the Party Program states, "have merged into the military-industrial complex and have become the most fervent proponents and organizers of a policy of adventurism and aggression. An evil alliance of merchants of death and the imperialist state power is a support for the extreme reaction and a constant and growing source of military danger...."(1)

The concept of the "military-industrial complex" was used for the first time by the U.S. President D. Eisenhower in his farewell speech on 17 January 1961. "The uniting of the enormous military organization and the extensive military industry," he said then, "is a new phenomenon in the American experience. Its economic, political and even spiritual influence is felt in each city, in the government of each state, and in any office of the federal government. In realizing the urgent need for such development, we should not remain unaware of its serious consequences. In the governmental bodies we must be more alert against the unjustified influence which, intentionally or not, the military-industrial complex has gained."(2)

The U.S. military-industrial complex is the most essential expression of the aggressive nature of modern American imperialism and a most important component in the state-monopolistic capitalism of the United States. In its structure one can clearly see three main parts: the management of the military-industrial corporations, the top level of the reactionary military and the portion of the state apparatus linked to these. Also a part of the MIC [military-industrial complex] is the entire network of secret and semi-secret government organizations including the NSC (National Security Council), the CIA, FBI and the special U.S. congressional committees which form an "invisible government" beyond the reach of American society and the activities

of which lie beyond the control and supervision of the society. The U.S. MIC is presently a powerful economic and political force.

The rise of the MIC is linked to the process pointed out even by V.I. Lenin of the development of state monopolistic capitalism, to the growing arms race and the growth of militarism.

In the United States, military-state monopolistic capitalism described by Lenin as "military forced labor for the workers and a military guard for the profits of the capitalists,"(3) underwent extensive development during the years of World War I and subsequent years. Military-industrial alliances arose and began gaining strength. Their activities attracted such serious attention from Congress that it adopted an unprecedented decision to conduct a special investigation of the defense industry.

The congressional committee stated: "In...America the world war created 22,000 new millionaires..."(4) It was pointed out that the "unhealthy alliance" of the suppliers of weapons and the military means "the coming to political power of groups which, in hiding behind talks about patriotism, are pursuing selfish aims."(5)

Very curious was the committee's opinion that such an alliance represents an "inseparable part of militarism," and is an "economic evil of wartime" and that in a period of peace its development "must be stopped at any price." It was recommended, in particular, that the private defense industry be nationalized.(6) But this generally humane proposal was pigeon-holed.

World War II was a powerful accelerator for the processes of militarization in the United States. The system of military-state monopolistic capitalism not only enriched the long extant groupings of financial capital but also fostered a new galaxy of magnates. The previously known manufacturers, gunpowder, revolvers and rifles such as Dupont, Colt, Winchester and others moved into the background, giving way to new powerful military-industrial concerns. In comparison with the present-day weapons empires the "merchants of death" of the 19th Century appear as innocent youths.

In the postwar period, in endeavoring to halt the further course of history and suppress the revolutionary and national-liberation movement, the United States assumed the functions of the world's policemen and became a center of international reaction and modern militarism. The military-industrial complex developed under these conditions.

U.S. defense production presently involves a very wide range of firms. Suffice it to say that there are 25,000 companies and institutions as primary contractors of the military agencies. Many firms turn over a portion of the orders to subcontractors the number of which exceeds 100,000. These 125,000 contractors and subcontractors operate in many-score economic sectors in all states of the nation. Each year the Pentagon agencies sign around 15 million contracts with their subcontractors.

In our literature, the Pentagon's major contractors, depending upon the volume of military orders, are usually divided into three groups.(7) In the first,

the largest, are General Dynamics and around another 30 companies; in the second there are approximately 40 firms including General Electric, Chrysler and others; in the third some 15 firms. With the aid of such a division, the question of the composition and structure of the U.S. MIC can be more objectively resolved.

However, it is scarcely possible with maximum accuracy to draw a demarcation line between the companies which are part of the MIC and those which border it. Facts show that over an extended time in the Olympus of the defense business there have been changes brought about by a sharp competitive struggle and military requirements. For example, during the period of the American aggression in Korea, the largest defense contractor was the General Motors Corporation which produced tanks and other types of conventional weapons. At the start of the 1980s, it had moved to 27th place. The main aim of the MIC in the current decade is to strengthen and widen the nuclear "triad": the intercontinental ballistic missiles, the nuclear submarine fleet and strategic aviation.

Currently there are around 150 weapons systems in various stages of development, production and modernization in the United States, including 19 aircraft and 17 strategic missiles. At the same time, space attack weapons are being developed. The implementation of these militaristic programs involves many industrial concerns, universities, laboratories, military-strategic centers but nevertheless the chief positions in this area are held by a rather stable group of corporations.

Who are they, the modern U.S. weapons magnates?

One of the presently most flourishing corporations is General Dynamics which has existed under this name (headquarters in St. Louis, Missouri) since 1952. In terms of the value of defense orders (\$7.74 billion according the 1985 results) it shares recently 1st-2d place with the McDonnell-Douglas concern. It basically produces only defense products, including the Trident submarines, the modern F-16 fighters, the M-1 Abrams tanks and so forth. The civilian affiliates of the company were recently dissolved due to inprofitability. In August 1986, at the yard in Groton there was a ceremony of commissioning the nuclear submarine "Nevada" with 24 nuclear missiles on board. This was the 8th submarine of this class in service in the U.S. Navy and the 9th was launched in December.

The main enterprises of the corporation are located in San Diego and Pomona, California, and in Fort Worth, Texas. Representatives of the capitalistic dynasty, the Crown father and son, dominate the board of directors.

In 1985, because of scandals caused by the overcharging of prices for products and other financial machinations, various congressional bodies and the Department of Justice began ten investigations at once against the company. However, this "investigation" was merely a diversion and soon everything had gone back to "business as normal."(8)

McDonnell-Douglas is the 2d leading contractor of the Pentagon. During the period of 1975-1977 and in 1981, the company led in the struggle even with

General Dynamics. The number of orders from the defense agencies continues to increase even now. In 1985, they were \$8.86 billion. This basically involves the production of the F-15 fighter bombers for the Air Force, the F-18 fighters for the Navy and the F/A-18 for both the armed services, modifications of the DC-10 aircraft for the Rapid Deployment Forces (RDF) and the A-8B vertical take-off aircraft for the Marine Corps. The firm also produces the AH-64A helicopter gunships, the Tomahawk cruise missiles, the Harpoon antishipping missiles, the Dracon antitank missiles, as well as the Phantom and Skyhawk fighters. The concern has been assigned work also in developing the ASAT antisatellite system.

The Lockheed Company (headquarters in San Francisco), like General Dynamics, has become a military-industrial concern specializing in missile production. Its defense orders for 1980-1983 rose to \$4 billion. It produces the TR-1 reconnaissance aircraft (an advanced version of the notorious U-2), the P-3 Orion ASW aircraft for the Navy, the CX and C-5 transport aircraft for the RDF, the Trident, Polaris and Poseidon missiles, neutron weapons and military amphibious vessels.

The Lockheed firm has received orders to develop an antimissile interceptor designed to hit targets beyond the atmosphere. This type of weapon is becoming an important component in the wide-scale antimissile defense system with space-based elements. The influence of the Rockefellers is strong in the company.

The major aerospace corporation Boeing (headquarters in Seattle) in 1977-1979 kept for itself defense orders totaling around \$1.5 billion. It holds a rather high place among the Pentagon contractors (in 1983, the volume of its defense orders was \$4.4 billion). The largest projects involve the production of the E-3 reconnaissance aircraft armed with the AWACS system, the B-52 strategic bomber and its modifications, and the KC-135 tanker aircraft. The firm builds the Minuteman intercontinental ballistic missiles (ICBM), air-to-ground missiles, it is involved in the programs for producing the MX missiles and the Roland missile units and is extensively developing space and antisatellite weapons. The corporation is controlled by the New York Rockefeller and Morgan banks.

Hughes Aircraft is specialized in producing high-precision electronic equipment for the missile industry. The corporation has widened the volume of defense orders from \$1 billion in 1977 to \$3.2 billion in 1983. The most important involve the Phoenix, TOW and Roland missiles, the TRAM, FLIR electronic systems, and the production of reconnaissance equipment. Moreover, the firm has been one of the initiators in the United States in developing laser and space weapons. It receives particularly high-secret governmental orders. It is considered a favorite of the CIA.

One other corporation which is basically employed in missile building is Martin-Marietta. It is the head contractor in the construction of the MX ICBM and the Pershing-2 medium-range missiles. Moreover, the firm produces the antitank missiles of the Hellfire system and the guided Copperhead missiles.

Here we have briefly reviewed only the main (and far from all) Pentagon contractors.(9) But the defense departments of the second group of companies are also components of the American MIC. And in the fight to gain defense orders they use the influence of the entire corporation. The predominance of civilian production in their activities does not mean that they do not undertake everything to maximally increase the number of Pentagon orders. For example, for the Chrysler firm, the multibillion-dollar order for the M-1 tanks until 1982 not only guaranteed strong support from the government but also was a lifesaver against the troubles which had beset the car market.

Table

**Major U.S. Military-Industrial Concerns
and the Growing Degree of Their Dependence Upon Defense Production***

Corporations	Primary Military Orders, \$ billion		Share of Defense Product in Total Sales Volume, %	
	1977	1982	1977	1982
General Dynamics	1,372	5,891	47	98
McDonnell-Douglas	2,574	5,630	71	78
United Technologies	1,587	4,208	29	36
General Electric	1,520	3,654	9	14
Lockheed	1,574	3,498	46	64
Boeing	1,579	3,239	36	37
Hughes Aircraft	1,093	3,141	64	90
Rockwell International	1,480	2,690	25	35
Raytheon	1,041	2,262	36	41
Martin-Marietta	426	2,008	30	58

* G.N. Tsagolov, "Milliardi na oruzhiye: Voyenno-priemyshlenny kompleks SSHA" [Billions for Weapons: The U.S. Military-Industrial Complex], Moscow, Mysl, 2d Supplemented Edition, 1986, p 84.

The concern Texas Instruments, starting in 1951, converted to producing "computer brains" and rather quickly under the name of General Incorporated "bypassed" its strong competitors and became one of the major Pentagon suppliers. In 1984, this company in terms of profit equaled such "behemoths" as Northrop and Boeing.

Thus, the course of the U.S. ruling circles of accelerating the arms race creates good conditions for further enrichment and a growing influence for the weapons-producing monopolies.

The union of industrialists, the military and the government plays an important place in the structure and functioning of the MIC. It is quite apparent that here the dominant role is played by the personal union of highly

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The union of industrialists, the military and the government plays an important place in the structure and functioning of the MIC. It is quite apparent that here the dominant role is played by the personal union of highly

placed military and emissaries of big business. The facts show, for example, that in 1959, 97 (out of the 100 investigated) leading U.S. defense companies which were responsible for 75 percent of all the contracts employed 768 officers who had retired with the rank of colonel and higher.

In recent years, the invasion of the military into private business has continued. In 1960, 100 of the leading military-industrial concerns employed 2,100 higher officers, that is, almost 3-fold more than 10 years previously. In 1975, due to leaving for defense business, the Pentagon lost 620 servicemen, and in 1976, 1,044. From 1979 through 1981, some 2,100 officers, generals and admirals moved from the Pentagon to the defense industry. According to the estimates of the U.S. General Accounting Agency, around 6,000 employees from the higher and middle levels of the Defense Department who left government service in the 1983-1984 fiscal year, are now employed in well-paid positions in the Pentagon's contractors. Many of them (45 percent) stated that their new duties require them to maintain contacts with former colleagues in the Defense Department while others (over 20 percent) admitted that they continue to be involved in the projects and programs with which they were concerned in the Pentagon. And this is very indicative.

The higher officers are used by the leaders of the corporations as "fixers" by which it is possible to gain advantageous military contracts from the Defense Department. One of the leading aviation industrialists Schenk said on this issue: "After World War II a new type of industrialist was born, the manager. He was a military man, usually with stars on his shoulders, who had responsibility for help in managing the largest business operations.... He brought with him into the civilian sphere enormous knowledge and effectiveness."(10)

At the same time, in the United States there is the extensive practice of a return of managers from the military-industrial corporations into the Defense Department. In 1975, this was 170 persons and in 1976, 374. In the apt expression of Senator W. Proxmire, "the revolving doors" between the defense industry and the Pentagon are not only open but spin at a crazy speed."(11)

Representatives of monopolistic capital from 1940 through 1967 have held the post of Secretary of the Army eight times, Secretary of the Air Force seven times and all the Secretaries of the Navy. The current Secretary of Defense C. Weinberger was the vice-president of the Bechtel Corporation. The Secretary of State G. Shultz also came from here. Due to influence in the government the Bechtel leadership has been able to obtain expensive defense contracts which meant good profits.

The former department chief of the RAND Corporation F. Ikle became the Undersecretary of Defense. Many other current leaders of the Pentagon also did not have the appropriate experience but were close to the leadership of the Reagan Administration which had come to power. Thus, the Secretary of the Navy D. Lehman prior to this had been president of the Abingdon Consulting Firm and was one of the Reagan advisors during the 1980 election campaign. The current Secretary of the Air Force V. Orr from 1970 through 1975 was the director of the Agency for Finance Questions in California and maintained

close contact with Reagan, while the Secretary of the Army J. Marsh was a partner in a law firm and an advisor to Reagan on legal questions.

An indicative example of the relationship of weapons business with the military-state and political spheres can be found in the California Northrop firm. In the 1970s, 343 military and government officials from the Pentagon and 17 highly-placed employees of the National Aeronautics and Space Administration (NASA) left government service in order to join the management personnel of the corporation. At the same time, 17 officials from the firm left it and became employees of the defense and space agencies. Six of the 11 directors of the Northrop firm, including the chairman of the board of directors T. Jones, worked previously in the State Department and defense agencies of the United States or those countries which purchase the products of this firm.

Thus, between the military, private business and the state apparatus there has come into being and is now functioning smoothly a complex and extended system of relationships, contacts and joint operations to allocate orders and profits as well as mutual support in the risky affairs of the MIC, bringing benefit to the participants of the complex. One of the main forms of collaboration of the defense and industrial circles is in the reciprocal and mass exchange of representatives. The Pentagon itself is a major property owner. It owns millions of hectares of land occupied by bases, barracks, testing ranges, training centers and other facilities. The value of the Pentagon's property at the beginning of the 1980s exceeded \$300 billion which is around 60 percent of all federal property and exceeds the total capital of the 15 largest U.S. corporations.

Science plays a noticeable role in the affairs of the MIC. The growth rate of its militarization in the United States has been one of the most acute problems going far beyond the development of scientific thought per se. The U.S. ruling circles view the scientific and technical potential for achieving military supremacy to what degree the balance of forces existing in the world can be disrupted.

Suffice it to say that the U.S. government's expenditures on research and development (R&D) of a military nature in 1980 reached almost \$14 billion, being 47.3 percent of all federal funds on R&D, or 20.8 percent of the total national expenditures on science and technology.(12) In 1981-1985, expenditures on the military aspects of R&D continued to grow.

For the 1985-1986 fiscal year, the administration requested around \$38 billion for conducting R&D and this was almost 26 percent more than was allocated in 1985. The allocated funds are to go for research and development of the ABM systems with space-based elements (around \$4 billion), the MX ICBM (around \$0.8 billion), Midgetman (\$0.6 billion), the Trident-2 submarine-based ballistic missiles (\$2.2 billion) and so forth.

The R&D for military purposes is being carried out by numerous scientific research centers or "think tanks" or "brain trusts." A large group of scientists is directly involved with the Pentagon. From this personnel many go to the White House staff and other government institutions. Understandably

they have a strong influence on the shaping of policy. The group is closely linked to many elements of the MIC.

As was announced by the UPI Agency, at present over 250 of the nation's universities and colleges cooperate with the defense agencies. In 1982, according to official data, the Pentagon concluded contracts with the nation's institutions of higher learning totaling \$852 million. This sum exceeds expenditures of the previous year by 20 percent. At present, major scientific discoveries are employed for developing and producing new weapons systems. The most refined means of mass destruction are being developed in scientific laboratories and research centers.(13)

The RAND Corporation is a typical "think tank" of the MIC. It serves the agencies of the Pentagon as well as NASA and the State Department.

Recently, the Center for Strategic and International Research at Georgetown University in Washington has been increasing its authority.

Johns Hopkins University holds one of the first places in the list of Pentagon contractors among institutions of higher learning. Its scientific developments of a military nature are assessed annually at almost \$236 million. The work done by the Massachusetts Institute of Technology is paid for with equal generosity.

The American Enterprise Institute (AEI) is closely tied to militaristic circles and the current administration. It employs both researchers from American universities as well as former state leaders including G. Ford, M. Laird and W. Simon. The nature of the institute's research can be judged from the published book "A Grand Strategy for the 1980s." Among its authors are Gen M. Taylor and Adm E. Zumwalt. Both fought in Vietnam, the former was in command of land operations and the latter at sea. Thus, imperialism draws on the talent of scientists and the achievements of human reason to prepare for a devastating war.

Thus, the rise and development of the U.S. military-industrial complex was brought about by objective patterns in capitalism. Many factors were the driving forces in the development of the MIC. One of the main ones has been the drive for world domination as proclaimed by U.S. monopolistic capital after World War II. The program adopted under the conditions of rapid scientific and technical progress by the U.S. ruling circles for achieving this aim has led to an unprecedented militarizing of the nation, to an arms race and to a subordination of all aspects of American life to the demands of the policy "from a position of strength."

Under these conditions there has been an unprecedented intertwining of ties, interests and goals of the private business magnates and the state leaders in the area of military policy and defense production. As a result, the real power of the MIC has constantly widened and precisely its activities now determine the nature of all the nation's domestic and foreign policy.

FOOTNOTES

1. "Materialy XXVII syezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 133.
2. Quoted in: B.D. Pyadyshev, "Voyenno-promyshlenny kompleks SShA" [The U.S. Military-Industrial Complex], Moscow, Voyenizdat, 1974, p 9.
3. V.I. Lenin, PSS [Complete Collected Works], Vol 34, p 191.
4. Quoted in: G. Green, "Zabytyy vrag" [Forgotten Enemy], Moscow, Izd-vo inostrannoy literatury, translated from the English, 1958, p 68.
5. P.A. Koistinen, "The Military-Industrial Complex. A Historical Perspective," New York, 1980, p 57.
6. Ibid.
7. G.N. Tsagolov, "Milliard na oruzhiye: Voyenno-promyshlenny kompleks SShA" [Billions for Weapons: the U.S. Military-Industrial Complex], Moscow, Mysl, 2d Supplemented Edition, 1986, pp 69-70.
8. Generally for achieving their aims the corporations frequently resort to such methods as bribery, graft and so forth. According to the data of the magazine BUSINESS WEEK, around 400 American companies have been caught red-handed in illegal machinations and involving state and political figures. Boeing and Lockheed alone spent over \$30 million for bribes.
9. For a detailed list of the U.S. military-industrial corporations, see: G.N. Tsagolov, op. cit., pp 64-126.
10. Quoted in: B.D. Pyadyshev, op. cit., pp 97-98.
11. Quoted in: G.N. Tsagolov, op. cit., p 55.
12. PRAVDA, 5 February 1981.
13. KRASNAYA ZVEZDA, 16 August 1983.

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ON THE PAGES OF THE GDR MILITARY HISTORY JOURNAL MILITARGESCHICHTE

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 89-90

[Article by Col V.I. Kuskov, candidate of historical sciences; spelling of German proper names has not been verified]

[Text] The journal MILITARGESCHICHTE (Military History) has been published by the GDR Military Publishing house since 1962. It contains material on the history of military policy, wars and military art, armed forces, military equipment as well as military thought. Along with historical and theoretical articles, it prints documents, memoirs, military history information, reviews and annotations of books and bibliographic works. Since 1971, MILITARGESCHICHTE has introduced the following new headings: "Military Traditions" and "From the History of Military Technology."

The journal's contents has changed in accord with the development of GDR military history science. While in the 1960s its pages basically contained articles devoted to the history of World War II (1939-1945), in the 1970s and 1980s, the subjects have been significantly widened and material has appeared on the events of military history prior to 1918 and the postwar period and dealing with methodological problems. A significant place has been assigned to articles devoted to unmasking the bourgeois falsifiers of military history.

Military historians from the GDR, the Soviet Union and the other socialist states are the authors of MILITARGESCHICHTE.

The issues in 1986, in honor of the 30th anniversary of the GDR National People's Army [NVA] have contained articles examining the problems of military organizational development in the republic. These include primarily those such as "Thirty Years of the GDR National People's Army" by Maj Gen R. Bruhl (No 1); the article "Certain Problems in the Development of the NVA Ground Forces in the Seventies" by G. Hohn and P. Kostial; "The Problems of Training Medical Personnel in the GDR Armed Bodies (1949-1961)" by E. Zolner (No 2); "On the Question of the Military Policy of the SED [Socialist Unity Party of Germany] During the Period of the Full-Scale Development of Socialism in the GDR in the 1960s" by K.-P. Meissner (No 3); "A Week of Combat Cooperation--A Socialist Tradition in the GDR" by K.-U. Keubke (No 1); "The Development of Combat Cooperation Between the GDR NVA and the Czechoslovak People's Army in

the 1960s" by R. Wenzke (No 4); "13 August 1961. An Action for the Sake of Preserving Peace" by K. Grese and V. Hanisch (No 4); "The Second Party Conference of the SED on Establishing Armed Forces" by K. Schutze (No 6).

In employing numerous documents and archival materials, the authors have analyzed in detail the activities of the SED in carrying out Leninist principles in the organizational development of a socialist-type army under the conditions of the GDR. The articles have objectively disclosed the prerequisites for the establishing of the GDR Armed Forces as well as the main problems and particular features of their development.

The authors of articles on the GDR NVA have pointed out that the organizational development of the republic's Armed Forces has been positively influenced by the following factors: the theoretical and practical experience of the CPSU and the other fraternal parties in the area of military organizational development; the all-round aid and support of the Soviet Union; the establishing of the Barracks People's Police in the aims of defending the socialist victories and serving as the basis for the development of the NVA; the marked successes in establishing the principles of socialism and the struggle for the victory of socialist production relations in the republic.

The articles have also described in detail how year by year the military skill of the NVA servicemen has improved and how their combat association with the men of the Soviet Army and the other Warsaw Pact armies has grown stronger and developed.

On the occasion of the 40th anniversary of the Nuremberg Trial which was marked in 1986, the 5th issue of the journal published articles by H. Busse and K. Hessker "Forty Years of the Nuremberg Trial. On the Question of the Punishment of War Criminals for Crimes Against Humanity" and by N. Muller "The General Staff and the Wehrmacht Supreme High Command Before the Court of the Nuremberg Tribunal." These provide a class assessment for the crimes of the Nazi leaders, they set out in detail the complex tasks which were carried out by the International Court, they show the process of eradicating Nazi elements on GDR territory, they bring out the role of the GDR in bringing surviving Nazi criminals to justice, and persuasively unmask the bourgeois apologists of Nazism. These articles contain rich factual material and numerous documentary sources were employed in writing them.

Of significant interest are the materials published under the heading "Documents" such as "The Meaning and Tasks of the Conference of the Chiefs of Staff of the Army Corps in Frankfurt-am-Main on 21 January 1914" (No 1), "Names Used in the Indoctrination and Training of the NVA Servicemen and GDR Border Troops" (No 1, No 4), "Views of the Nazi German Command on Wartime Propaganda" (No 3), and recollections of associates of the former GDR Minister of National Defense, Army Gen G. Hoffmann about his life and activities (No 6).

A number of articles was devoted to unmasking the aggressive policy of imperialism and to the problems of the struggle of the progressive forces for maintaining peace and international security at the present stage. Among them were the articles by M. Puschel ("Support of France for FGR Military Policy in

the 1960s and 1970s" (No 1); T. Dobias, M. Jakisch and W. Roschlau "The NATO Strategy of Forward Lines and the Influence of the FRG on Its Development Up to 1963" (No 2); B. Heiman "On the 30th Anniversary of the Collapse of Imperialist Aggression Against Egypt" (No 4); S. Sommer "At the Start of the Struggle for Nuclear Disarmament" (No 4) and others.

In the journal a significant place has been devoted to the military history up to the present time. This includes the article by the Soviet historian V. Buganov "The Streltsy in Russia (16th Century--Beginning of 18th)" (No 2); the authors of the GDR J. Lampe "The Position of the German Social Democrats on the First Balkan War," K. Holzapfel "The Basel Compromise Peace of 1795," G. Schnitter "The Prussian King Frederick II as a General and Military Theorist" (No 3), G. Otto "The Battle of Verdun" and G. Fesser "The Battle of Jena and Auerstedt in 1806" (No 5).

Under the heading "Scientific Information" are articles devoted to important military history dates: "The 25th Anniversary of the GDR Army Museum" (No 1), "On the 250th Anniversary of the Death of Eugen von Savoy" (No 2), "On the 50th Anniversary of the Military Putsch in Spain" (No 3), "The 30th Anniversary of the GDR Military Publishing House" (No 4), "On the 50th Anniversary of the Defense of Madrid" (No 5) and others. Under this same heading were published the bibliographic article of N. Bugay and H. Hirz on the new Soviet literature on the history of the Great October Socialist Revolution and Civil War (No 3), the analytical reviews of the military history journals of Poland for 1981-1983 (No 1), the Soviet Union for 1985 (No 3), the CSSR for 1984-1985 (No 6), the U.S. journal MILITARY AFFAIRS for 1984-1985 as well as information on international conferences dealing with the problems of military history and held in 1986.

The section "Criticism and Bibliography" provides reviews and brief summaries of numerous new books by authors not only of the GDR but also other foreign countries, predominantly the Soviet Union. In 1986, the journal published reviews of the works of M.A. Gareyev, "M.V. Frunze--voyennyy teoretik" [M.F. Frunze--Military Theorist], N.M. Shilintsev "Stranitsy proletarskoy solidarnosti" [Pages of Proletarian Solidarity], A.I. Cherepanov "Pole ratnoye moye" [My Battlefield], V.I. Chuykov "Missiya v Kitaye" [Mission to China], Ye.F. Ivanovskiy "Ataku nachinali tankisty" [The Assault Was Started by the Tank Troops], A.T. Altunin "Zvezdy nad Visloy" [Stars Over the Vistula], and G.N. Shinkarenko "Nesushchiye fakel" [Torch Bearers] (No 1), M.F. Yuryev "Vooruzhennyye sily KPK v osvoboditelnoy borbe kitayskogo naroda v 20-40e gody" [Armed Forces of the CCP in the Liberation Struggle of the Chinese People in the 1920s-1940s], B.G. Sapozhnikov "Narodno-osvoboditelnaya voyna v kitae v 1947-1950 gg." [The People's Liberation War in China in 1946-1950], N.A. Kirsanov "V boyevom stroyu narodov-bratyev" [In Battle Formation of Fraternal Peoples], F.D. Sverdlov "Frontovymi dorogami Litvy" [By the Front Roads of Lithuania] (No 3), V.A. Zolotarev "Rossiya i turtsiya" [Russia and Turkey] (No 4) and V.M. Ivanov "Marshal M.N. Tukhachevskiy" (No 5).

In these and other articles the reader will find much interesting and useful information on military history subjects.

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INTERNATIONAL FORUMS ON MILITARY HISTORY PROBLEMS

Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 3, Mar 87 (signed to press 24 Feb 87) pp 91-96

[Conference report by Col A.S. Yakushevskiy, candidate of historical sciences and O.A. Rzheshevskiy, doctor of historical sciences, professor]

[Text] The closer contacts become between nations and peoples, the stronger their desire to know more about one another. The search for the new forms of exchanging information is becoming a characteristic feature in the development of modern science and culture. In particular, different colloquiums and symposiums have begun to be held. Thus, in October 1986, in the Soviet Union (Moscow) the first Soviet-American colloquium was held on the problems of the history of World War II and in the United States (Colorado Springs), an international symposium on the subject "The Evolution of Russian and Soviet Military History." These forums became an arena of heated political debates on many questions of military history. Their participants often voiced diametrically opposed viewpoints, particularly as concerned consideration of the lessons of history in resolving present-day world problems. Our representatives had to defend the historical truth against encroachments by revisionary bourgeois theorists. The benefit gained as a result of the frank and direct dialogue was obvious: a decisive rebuff was dealt to the bourgeois falsifiers of history, and the Soviet viewpoint was again explained concerning the development of events in the prewar period and World War II; a clear notion was gained concerning the directions of military history search in the NATO states as well as about the differences in the views of various Western historians.

The Moscow Colloquium

Upon invitation from the USSR Academy of Sciences, ten American historians basically professors from various U.S. universities, arrived in Moscow to participate in a Soviet-American colloquium on the problems of the history of World War II. Participating in the colloquium was one American military historian, Col D. Glantz, the chief of the Directorate for the Study of the Soviet Army under the U.S. Army Research Center located in Fort Leavenworth, Kansas. The delegation was headed by a professor from Rutgers University (Newark, New Jersey) W. Kimball. Participating in the work of the colloquium on the Soviet side were co-workers from the Institute of USSR History and

Institute of World History under the USSR Academy of Sciences, the Military History Institute of the USSR Ministry of Defense, the History Institute of the Belorussian Academy of Sciences, as well as certain other Soviet scholars who are specialized on the problems of the history of World War II. The Soviet delegation was headed by the chief of the Sector for the History of the United States and Canada under the Institute of World History of the USSR Academy of Sciences, Prof G.N. Sevostyanov.

Over a period of 3 days, from 21 through 23 October 1986, more than 20 papers were heard at the colloquium. Each of these evoked a sharp debate.

The U.S. historians devoted basic attention to Soviet-American relations in the prewar period and the first 3 years of World War II. Their papers and speeches took up in detail the reasons which caused the F. Roosevelt Administration in 1933 to recognize the Soviet Union and establish diplomatic relations with it, as well as the response of the U.S. ruling circles and public to the foreign policy measures of the USSR in 1939-1941 and the start of the Great Patriotic War. In restricting themselves to merely reviewing the diplomatic aspects of the prewar period, they avoided going into the essence of Nazism and showing its anti-Soviet and antidemocratic nature, and they avoided speaking about the policy of the Western powers to "conciliate" the Nazi states and which led to World War II; they said nothing about the Nazis' anti-Soviet military plans in the autumn of 1939 and the spring of 1940. At the same time they attempted to distort Soviet-German relations and the measures of the USSR to ensure the security of its frontiers in 1939-1940. The one-sidedness and tendentiousness of the American speeches evoked an appropriate response from the Soviet side. Here a number of facts voiced by our historians and viewpoints defended by them was a sort of revelation for certain American colleagues.

In the course of the debate, the Soviet historians criticized the traditional bourgeois interpretation which could be heard in certain American papers concerning the aims of the Soviet-German Non-aggression Treaty of 23 August 1939 and the distorted description of the content of the Soviet-German talks in November 1940. They drew attention of those present to the fact that the Soviet government was forced to accept Germany's proposal to sign the non-aggression treaty with it only after England and France had broken off the political and military talks with the USSR. Before the breaking off of the Moscow talks, this act did not enter the plans of Soviet diplomacy. In the extremely dangerous situation which developed in the summer of 1939 for our nation, under the conditions of the threat of the establishing of a united anti-Soviet front of international imperialism, the Soviet Union was forced to show vigilance and activeness in order to maintain its sovereignty. It did not have any territorial claims against other countries. Having concluded the treaty with Germany, the Soviet government for a time brought the nation out from under the immediate blow by the Nazi aggressor, and gained time for strengthening the defense capability and the preparation of its Armed Forces to rebuff the enemy.

In contrast to the American historians, the Soviet participants in the colloquium in their papers raised the larger problems of the preparations for and course of World War II, and linked them to the present-day international

situation. The paper of Prof G.N. Sevostyanov, for example, took up the problems of collective security which arose in 1933-1938 and on the basis of new materials showed the activities of the USSR to organize a collective rebuff of Nazi aggression and showed that due to the opposition of the Western powers it was impossible to establish an effective system of collective security. Doctor of Historical Sciences, Maj Gen I.A. Babin (Military History Institute of the USSR Ministry of Defense) took up the main areas of strengthening Soviet defense capability in the prewar years, and concluded the necessity of strengthening our nation's defense might until the Soviet proposals had been adopted for eliminating nuclear weapons and reducing conventional armaments. In the paper "On the International Position of the USSR on the Eve of the Great Patriotic War," the Editor-in-Chief of the journal SSHA--EKONOMIKA, POLITIKA, IDEOLOGIYA, V.M. Berezhkov pointed out that just as in July 1941 Nazi propaganda explained the necessity of a campaign against the USSR by the presence of a "Soviet threat" to Germany and all of Europe, so at present U.S. imperialist propaganda is using the same bugbear to justify a new notch in the arms race and Star Wars. Doctor of Historical Sciences D.M. Proektor (Institute of World Economy and International Relations of the USSR Academy of Sciences) in his paper gave special importance to the Battle of Moscow, to its role in the global balance of forces in World War II and strengthening the anti-Hitler coalition, and to its effect on the greater authority of the Soviet Union as a world power. Many important problems were brought out also in the speeches by other Soviet historians.

The colloquium participants substantially complemented the paper by Prof M. Stoler on the problems of the second front in Soviet-American relations in 1941-1942, particularly that portion where it stated that the United States was sincerely in favor of a landing in Europe in 1942, but did not have the necessary resources for this and was unable to surmount English resistance to this plan.

In the course of the discussion, Soviet historians (G.F. Baydukov, O.A. Rzheshevskiy, A.S. Orlov and others) with the help of persuasive arguments proved that the Western Allies, regardless of certain difficulties, in 1942 did have the opportunity to land their troops in Western Europe. This was supported by the fact that, in the first place, in the West, Germany would be unable to rebuff the invasion (only 35 weakened German divisions were located there), and secondly, the Western Allies possessed a sufficient number of men and weapons for an invasion (by the end of 1942, the United States had 72 divisions and England had 65; the Americans alone had 10,000 combat aircraft and 400 ships).(1)

In the Soviet speeches, a sound scholarly criticism was leveled against the desire of the U.S. historians to prove, referring to the note of W. Churchill of 10 June 1942, that the Western Allies did not pledge to open a second front in 1942. This note, as the Soviet scholars pointed out, was of the nature of a one-sided statement and for this reason it must not be viewed separately from the coordinated and jointly adopted documents and generally from the talks on the given question and in the course of which the Soviet delegation in the interests of reaching agreement on a second front made a number of substantial concessions (a reduction in deliveries, and an agreement to

exclude from the text of the Anglo-Soviet Treaty the question of recognizing the western Soviet frontiers).(2)

The rejection of the landing in 1942, in the opinion of Soviet historians, is to be explained by the abandoning by the Western Allies of a general coalition strategy, by a disregard of Allied obligations toward the USSR and by a consideration of just their selfish goals. At the same time the United States and England did not wish to lose such an ally in the war against Germany as the USSR. After the Soviet Army had dealt a tangible defeat to the Nazis at Moscow, the American military strategists hurried to put together a plan for accumulating troops on the British Isles for an invasion of Europe. Precisely at this time Washington decided to make the initiative to invite Soviet representatives to the United States for talks on the question of the second front. It was also important for the U.S. government to pacify the American public which was demanding an opening of the second front. On 11 April 1942, President F. Roosevelt invited the Soviet counsellor of the embassy to the United States A.A. Gromyko to make a visit and entrusted to him a personal message to I.V. Stalin. The message stated the American desire to "ease the critical situation" on the Soviet-German Front and help the Soviet Union in destroying the Nazi armies and materiel better than had been done up to then.(3) It is noteworthy that American historians prefer not to recall this message from the president, as it promised much more than the United States intended to do.

The papers of Profs W. Kimball and T. Wilson were marked by being full of facts, including new ones. They pointed out that the U.S. military-political leadership in the summer and autumn of 1941 did not fully recognize the importance and scale of the armed struggle on the Soviet-German Front. In defining its attitude toward the war which had commenced on 22 June 1941, the Roosevelt government, in the words of T. Wilson, endeavored first of all to emphasize its own moral interest in the struggle of the Soviet Union, as the enemy of Nazism, but was in no hurry to provide it with material aid. This led to a situation, as T. Wilson admitted, that American aid in 1941-1942 was comparatively meager and could not play a substantial role in the struggle of the Soviet people.

The paper of the American Col D. Glantz on the subject "American Perspectives on Eastern Front Operations in World War II" attracted particular attention from the Soviet participants of the colloquium. The interest was caused, on the one hand, by the untraditional positing of the very subject of the paper and, on the other, by the official position of the speaker, one of the leaders of the military history service of the U.S. Army. While all other papers dealt with the events of 1933-1941, the paper by Glantz dealt with how the United States during World War II and after its end perceived and does perceive the armed struggle on the Soviet-German Front as well as the actions of the Soviet troops. The presented paper is proof of the presence of stagnation phenomena in American bourgeois historiography of the Great Patriotic War of the Soviet Union. It again affirmed that U.S. historians are focusing chief attention not on an objective depiction of the struggle of the Soviet people against the Nazi invaders, but on using a distorted history of this struggle for anti-Soviet and anticommunist purposes. At the same time,

the paper showed the contradiction inherent to bourgeois historiography between the cognitive (applied scientific) and ideological functions.

According to the conclusions drawn by Glantz, in the United States a "distorted notion" has prevailed up to the present concerning the importance of the Soviet-German Front in World War II and that the Americans feel that the Soviet Union played a "secondary role" in the defeat of Nazi Germany. "Only a few of the events of the 20th Century," the paper stated, "are dealt with without distortion and prejudice. Of the major events this was reflected to the greatest degree in the treatment of World War II, particularly the war on the Eastern Front, the Russo-German War. Digression from the truth, incomplete treatment and outright tendentiousness in all areas led to the creation of an inaccurate or distorted history of the war and contributed to the taking root of incorrect notions and hostility."(4)

In recognizing that bourgeois authors distort the history of the war of the Soviet people against the Nazi invaders, Glantz explains this by the dominant influence on the shaping of American notions about events on the Soviet-German Front of memoir and research works by former Nazi generals and officers and which came out immediately after the war and were widespread in the United States. They were all marked by tendentiousness and in every possible way extolled the actions of the German troops. Starting in the 1960s, the United States began publishing works by American and English authors on the Soviet-German Front but the "German views" continued to prevail in them. As an example, Glantz gives the book by E. Zimke "From Stalingrad to Berlin" written almost completely on the basis of German sources. Glantz considers the only exception to be the books by the English historian J. Erickson "The Road to Stalingrad" and "The Road to Berlin" and in which the author has drawn widely on Soviet sources and statistical data. However, the works by Erickson are known only to a narrow academic circle and for this reason have not had a substantial impact upon the views of the Americans concerning the Soviet-German Front. "The entire period from 1945 up to the present," said Glantz in the paper, "...has been dominated by German views on the war on the Eastern Front.... As a result these views have taken root in the textbooks for secondary schools and colleges as well as in the curricula of the U.S. military schools. And what is even more important, they have created the basis for judgments concerning the present-day Soviet Army."(5)

The class position of Col Glantz and those who stand behind him was clearly reflected in the attacks on Soviet literature dealing with the Great Patriotic War. In showing at times a readiness to criticize certain ideas of bourgeois historiography, Glantz and his like-thinkers continue to pursue anti-Soviet, anticommunist aims. They have carefully studied the historical material in order to use it for preparing the United States and the American Armed Forces for a war against the USSR and the other socialist commonwealth countries. In this instance, these researchers approach the study of history from the positions of realism, as they are working in the interests of the development of the armed forces and the combat readiness of the troops in the imperialist powers. Their works are designed for a comparatively narrow circle of military specialists.

However, the basic mass of U.S. bourgeois literature about World War II, particularly about the Soviet-German Front, is being created, as the colloquium held in Moscow showed, as grounds for various military-political concepts of imperialism and for influencing the population in a spirit of anticomunism and anti-Sovietism and hegemonic imperialist aspirations. Such literature is designed to combat the communist ideology and extol imperialist policy. For this purpose the bourgeois historians treat the problems of World War II in a prejudiced manner and primarily those which are of a sociopolitical and philosophical-sociological nature. These include: the reasons and guilty parties of the war, the contribution of various states of the anti-Hitler coalition to defeating the fascist-militaristic bloc and liberating the enslaved peoples, and the reasons for defeat and the sources of victories. Many of these problems evoked a sharp debate among the participants of the Soviet-American colloquium. Soviet historians employed the colloquium in order to rebuff those who distort the truth in interpreting a number of important problems in the history of World War II. In the process of the colloquium, both sides were clearly persuaded that a frank debate helps to improve the understanding of one another as well as elucidate the positions of the sides.

The Symposium in the United States

From 1 through 3 October 1986, an international seminar on the subject "The Evolution of Russian and Soviet Military History" was held in Colorado Springs, the United States, by the Air Force Academy which is one of the centers of military history research. Participating in it were representatives of the United States, Great Britain, Canada, the FRG, France and the USSR. There were most Americans who were co-workers from various military institutions, universities, the CIA, State Department, as well as historians and diplomats. Organizational preparations for the symposium were provided by the History Chair of the Air Force Academy (Chief of the Chair, Col, Prof C. Ridel).

The symposium was held in a situation of the widening influence of the Soviet peace initiatives and the fierce resistance to them by the U.S. reactionary circles and primarily the military-industrial complex. It consisted of five sessions: "Military Heritage of Imperial Russia" (leader, Professor at the University of California, N. Ryazanovsky); "Soviet Military Doctrine" (leader, Air Force Attaché at the U.S. Embassy in the USSR, Col R. Burley, Ph.D.); "The Great Patriotic War" (leader, Chairman of the U.S. Commission for Military History, Brig Gen (Ret) D. Collins); "The USSR as a Military Super Power" (leader, Lt Gen (Ret) R. Furlong); concluding (Chairman, Professor at Indiana University R. Burns). Also speaking at the last session was the consultant to the British Cabinet M. Macintosh, the scientific leader of the Military History Directorate of the Bundeswehr E. Klink and a representative from the French Higher Institute of National Defense J.C. Romer.

Each session heard two or three papers and the opinion of a commentator and there was a discussion of the material in the form of questions and answers. Speaking as commentators were the Professor of the U.S. Naval Academy C. Fuller, the leader of the Foreign Directorate of U.S. Military Intelligence D. Dziak, the professor from the University of Georgia E. Zimke and a

representative of the State Department, Ambassador L. Hansen. On two subjects ("Service in the Tsarist Army" and "The Soviet Serviceman"), special papers were read by the professor from the University of Toronto D. Keep and the U.S. Military Attaché to France, Brig Gen R. Lajoie.

The symposium was aimed at intensifying an analysis of USSR military history and generalizing the already extant results in order to more productively utilize the results for evaluating modern military doctrine, military art and combat capability of the Soviet Armed Forces in terms of the military plans, strategy, tactics, combat training and ideological influencing of the personnel in the U.S. Armed Forces. A number of the participants from the NATO countries endeavored to utilize the symposium rostrum for anti-Soviet propaganda referring to the myth of the "Soviet military threat" and various fabrications relating to the approaching 50th anniversary of the start of World War II. Certain papers showed a tendency for a more or less objective view of the reality of military history: "Service in the Tsarist Army" by the Canadian Professor D. Keep; "The Development of the Offensive in Depth: A Soviet Operational Maneuver" by Col D. Glantz; "The Contribution of the Soviet Air Forces to Achieving Strategic Aims" by the Vice Marshal of the Royal Air Force A. Mason and certain others.

Individual papers, in particular that by Brig Gen R. Lajoie and the recent leader and now the consultant at the Center for Soviet Research of the Royal Sandhurst Academy (Great Britain) P. Veiger "The Functions of Military History in the Soviet Union" had an openly anti-Soviet nature.

The tone was set in this area by D. Dziak in his disinformation on prewar Soviet policy. He repeated the well-known lie that the 1939 Soviet-German Treaty opened the way to World War II. P. Veiger endeavored to present Soviet military history science as "a means of communist propaganda" and discredit the works by Soviet historians, speculating on the ignorance of them among a significant portion of the audience. E. Zimke repeated his previous assertions that "even in 1945, the Soviet Air Force had not reached the level of skill of the German Luftwaffe" remaining silent to the question posed to him of how, in this instance, the Soviet Air Forces as early as 1943 had permanently won over-all air supremacy and even in the very difficult year of 1941 had been able to achieve advantages in the course of the Battle of Moscow. Also far-fetched and unproven was the thesis of the Acting Director of the International University of Field Staffs D. Thompson on the "transformation" of Soviet military doctrine from a defensive to an offensive one just when the Soviet Strategic Rocket Troops were established. The commentary of Ambassador L. Hansen was kept in the spirit of the traditional ideas of the State Department.

The paper of the Soviet representative explained the theoretical and methodological ideas of Soviet historical science, the bases of the Marxist-Leninist concept of our nation's military history, the sources and succession of the defensive nature of Soviet military doctrine as brought out in the Political Report of the General Secretary of the CPSU Central Committee M.S. Gorbachev to the 27th CPSU Congress. The new achievements of Soviet historians were shown and the fallaciousness of a number of theses and conclusions given at the symposium was brought out; the opinion was expressed

that an objective study of Soviet military history will help to elaborate realistic views concerning the peace-loving Soviet policy, that is, to a mutual understanding between the United States and the USSR in the aim of preventing a nuclear war. In conversations with symposium participants, answers were provided to the questions which dealt basically with Soviet policy in the prewar period, the Great Patriotic War as well as the prospects for the forthcoming of M.S. Gorbachev and R. Reagan in Reykjavik.

The symposium showed that in the United States the study of Soviet military history is being employed evermore actively for assessing the military-political potential of the Soviet Union and for the training and ideological influencing of the personnel.

FOOTNOTES

1. "Istoriya vtoroy mirovoy voyny 1939-1945" [History of World War II of 1939-1945], Moscow, Voyenizdat, Vol 6, 1976, pp 15, 21.
2. See: I.N. Zemskov, "Diplomaticeskaya istoriya vtorogo fronta v Yevrope" [Diplomatic History of the Second Front in Europe], Moscow, Politizdat, 1982, p 91.
3. "Perepiska Predsedatelya Soveta Ministrov SSSR s presidentami SShA i premyer-ministrami Velikobritanii vo vremya Velikoy Otechestvennoy voyny" [Correspondence of the Chairman of the USSR Council of Ministers With the U.S. Presidents and British Prime Ministers During the Great Patriotic War of 1941-1945], Vol 1, Correspondence with F. Roosevelt and H. Truman (August 1941-December 1945), Moscow, Politizdat, 2d Edition, 1976, pp 17-18.
4. D. Glantz, "American Perspectives on Eastern Front Operations in World War II," Fort Leavenworth, 1986, p 2.
5. Ibid.

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